HRB-SINGER, INC.
2100 RESTON AVENUE, RESTON, VIRGINIA 22091
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VOLUME II
INSTRUCTION MANUAL
R1300 VHF PHASE LINEAR RECEIVER
5046-M-2

ASSEMBLY DRAWINGS, SCHEMATICS AND PARTS LISTS

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LIBRARY

SINGER

HRB-SINGER, INC.
2100 Reston Avenue
Reston, Virginia
22091

VOLUME II

INSTRUCTION MANUAL

R1300 VHF PHASE LINEAR RECEIVER

5046-M-2

ASSEMBLY DRAWINGS, SCHEMATICS AND PARTS LISTS

OCTOBER 1977

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---	1st Converter (107211)	---
---	2nd Converter (107221)	---
---	3rd Converter (107231)	---
---	Reference Oscillator (107341)	---
---	71.4 MHz to 621.4 MHz Synthesizer (107241)	---
---	Coarse YIG Driver (107271)	---
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---	5-Digit Readout (105061)	---
---	Pre-Selector (107361)	---
---	Pre-D Converter (107351)	---

SECTION VI
SCHEMATIC AND ASSEMBLY DRAWINGS

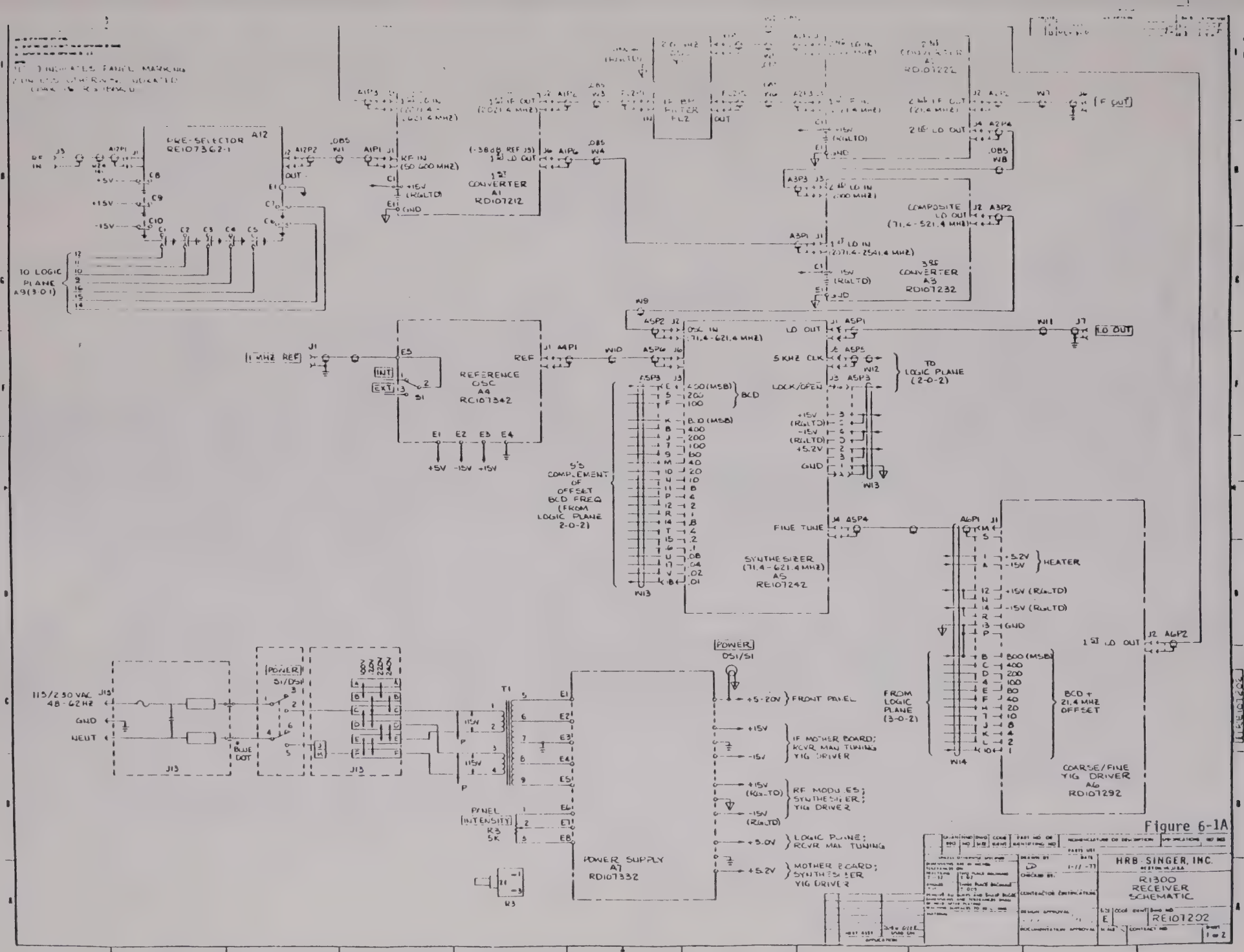

PRE-SELECTOR A12
RE107362-1
TO LOGIC PLANE A9(3-0-1)
1ST CONVERTER A1 RD107212
IF BP FILTER FL2
2ND CONVERTER A2 RD107222
COMPOSITE LO OUT (71.4-521.4 MHZ)
3RD CONVERTER A3 RD107232
REFERENCE OSC A4 RC107342
1 MHZ REF
INT
EXT
+5V -15V +15V
5'S COMPLEMENT OF OFFSET BCD FREQ (FROM LOGIC PLANE 2-0-2)
BCD
SYNTHESIZER (71.4-621.4 MHZ) A5 RE107242
FINE TUNE
5 KHZ CLK
LOCK/OPEN
TO LOGIC PLANE (2-0-2)
LO OUT
HEATER
FROM LOGIC PLANE (3-0-2)
BCD + 21.4 MHZ OFFSET
COARSE/FINE YIG DRIVER A6 RD107292
1ST LO OUT
115/230 VAC 48-62 HZ
GND
NEUT
POWER S1/DS1
BLUE DOT
POWER DS1/S1
+5-20V FRONT PANEL
IF MOTHER BOARD; RCVR MAN TUNING YIG DRIVER
RF MODULES; SYNTHESIZER; YIG DRIVER
LOGIC PLANE; RCVR MAN TUNING
MOTHER BOARD; SYNTHESIZER YIG DRIVER
PANEL INTENSITY R3 5K
POWER SUPPLY A7 RD107332
HRB-SINGER, INC.
R1300 RECEIVER SCHEMATIC
RE107202

Figure 6-1A

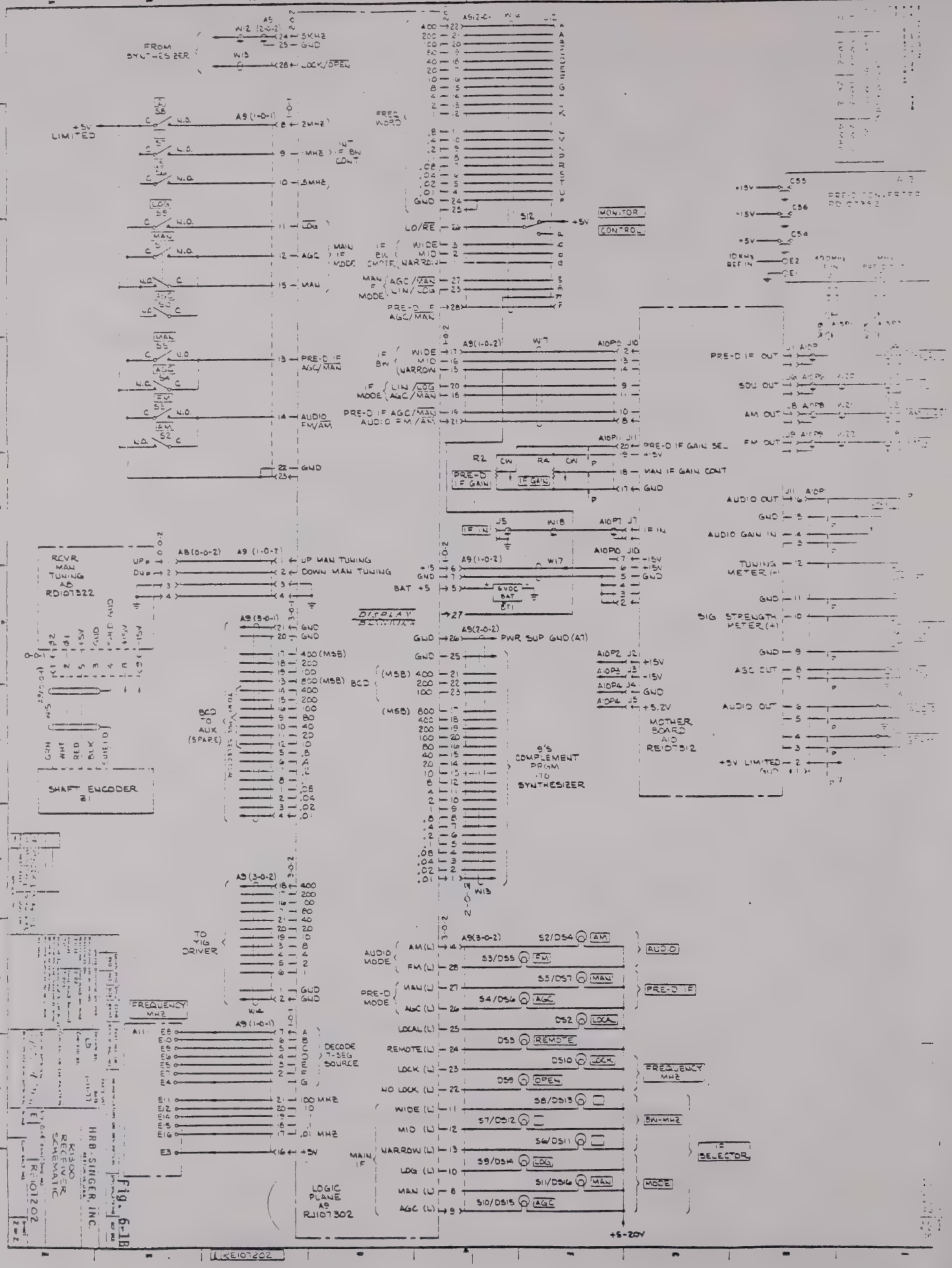

FROM SYNTHESIZER
5KHZ
GND
LOCK/OPEN
+5V LIMITED
2MHZ
MHZ
.5MHZ
LOG
AGC
MAN
MAIN IF MODE
PRE-D IF AGC/MAN
AUDIO FM/AM
FREQ WORD
LO/RE
MONITOR
CONTROL
IF BW CMPTR
WIDE
MID
NARROW
MAN IF MODE
AGC/MAN
LIN/LOG
PRE-D IF AGC/MAN
PRE-D IF OUT
SDU OUT
AM OUT
FM OUT
PRE-D IF GAIN SEL
MAN IF GAIN CONT
PRE-D IF GAIN
IF GAIN
IF IN
AUDIO OUT
AUDIO GAIN IN
TUNING METER (+)
SIG STRENGTH METER (+)
AGC OUT
+5V LIMITED
RCVR MAN TUNING A8 RD107322
UP MAN TUNING
DOWN MAN TUNING
BAT +5
6VDC BAT
DISPLAY BLANKING
PWR SUP GND (A7)
BCD TO AUX (SPARE)
SHAFT ENCODER B1
9'S COMPLEMENT PRGM TO SYNTHESIZER
MOTHER BOARD A10 RE107312
TO YIG DRIVER
FREQUENCY MHZ
DECODE 7-SEG SOURCE
100 MHZ
.01 MHZ
+5V
LOGIC PLANE A9 RJ107302
AUDIO MODE
PRE-D MODE
AM (L)
FM (L)
MAN (L)
AGC (L)
LOCAL (L)
REMOTE (L)
LOCK (L)
NO LOCK (L)
WIDE (L)
MID (L)
NARROW (L)
LOG (L)
MAN (L)
AGC (L)
S2/DS4 AM
S3/DS5 FM
S5/DS7 MAN
S4/DS6 AGC
DS2 LOCAL
DS3 REMOTE
DS10 LOCK
DS9 OPEN
S8/DS13
S7/DS12
S6/DS11
S9/DS14 LOG
S11/DS16 MAN
S10/DS15 AGC
AUDIO
PRE-D IF
FREQUENCY MHZ
BW-MHZ
IF SELECTOR
MODE
+5-20V
HRB-SINGER, INC.
R1300 RECEIVER SCHEMATIC
RE107202

Fig. 6-1B

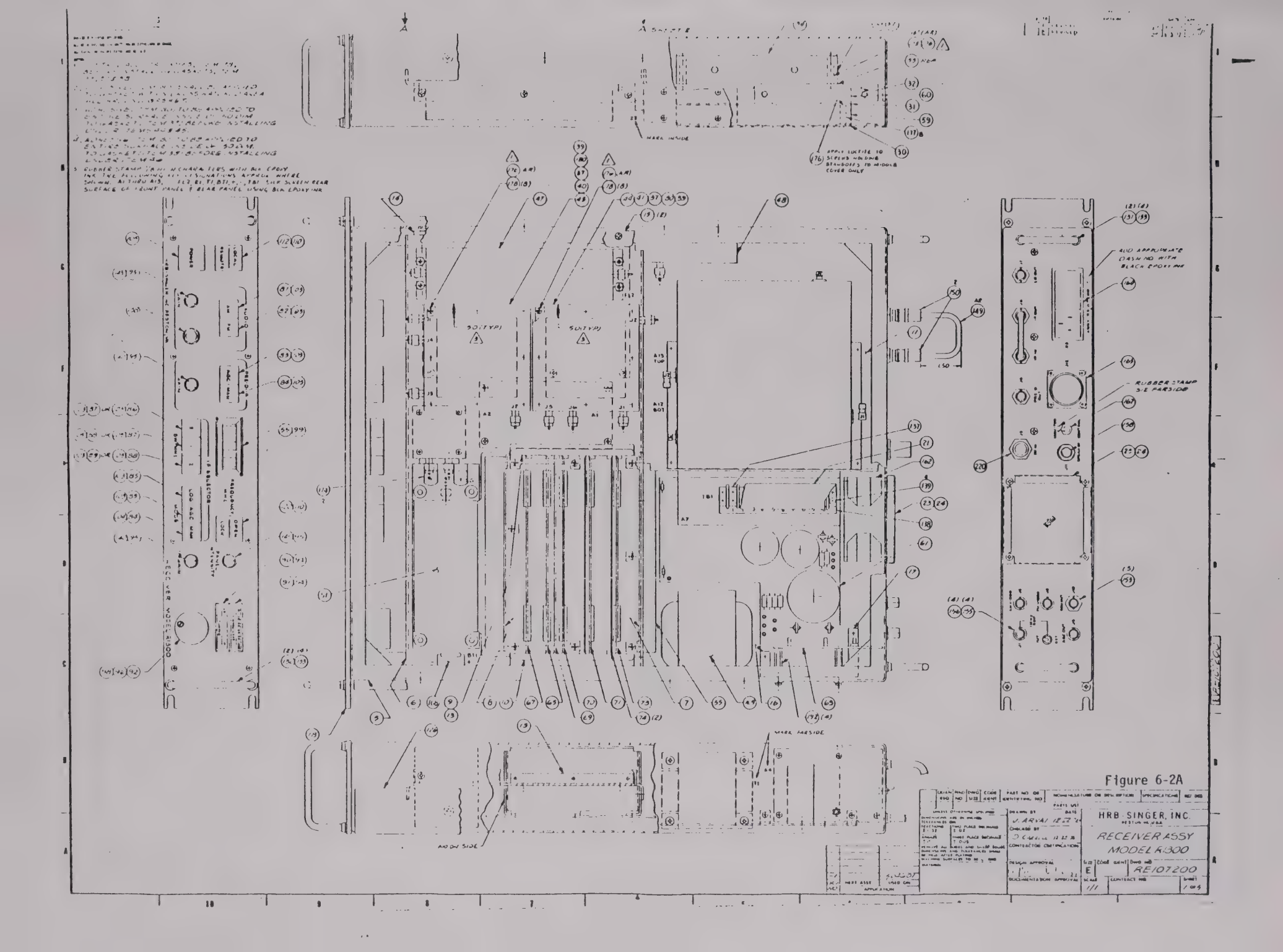
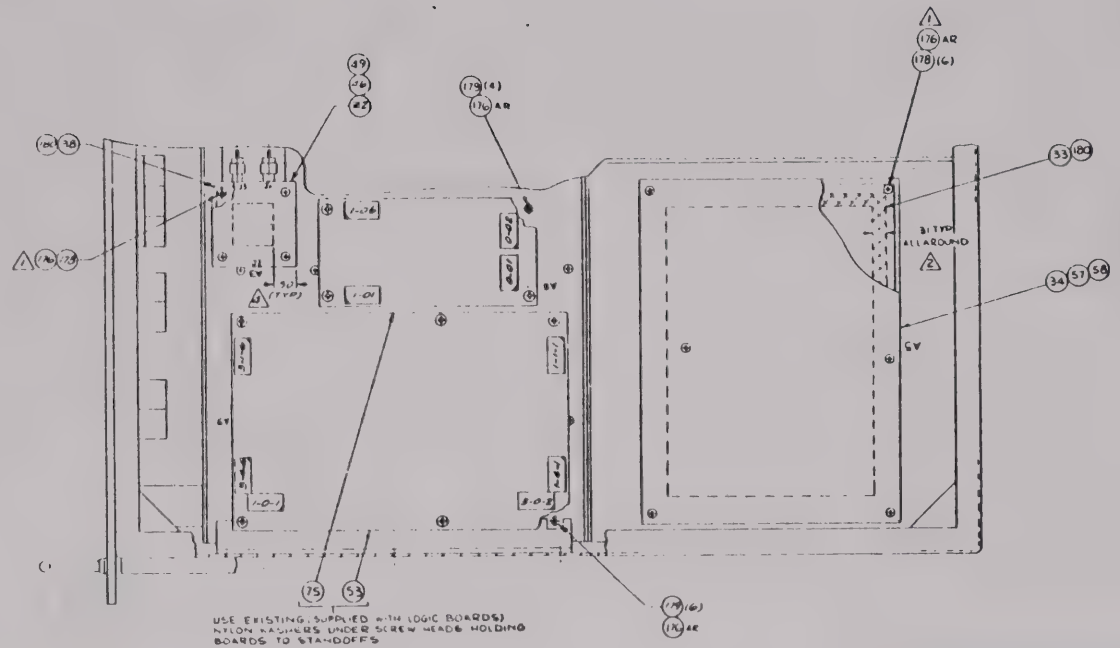


Figure 6-2A



VIEW A-A
SEE SHEET 1

Figure 6-2B

HRB-SINGER, INC.
RECEIVER ASSY
MODEL R1300
RE107200

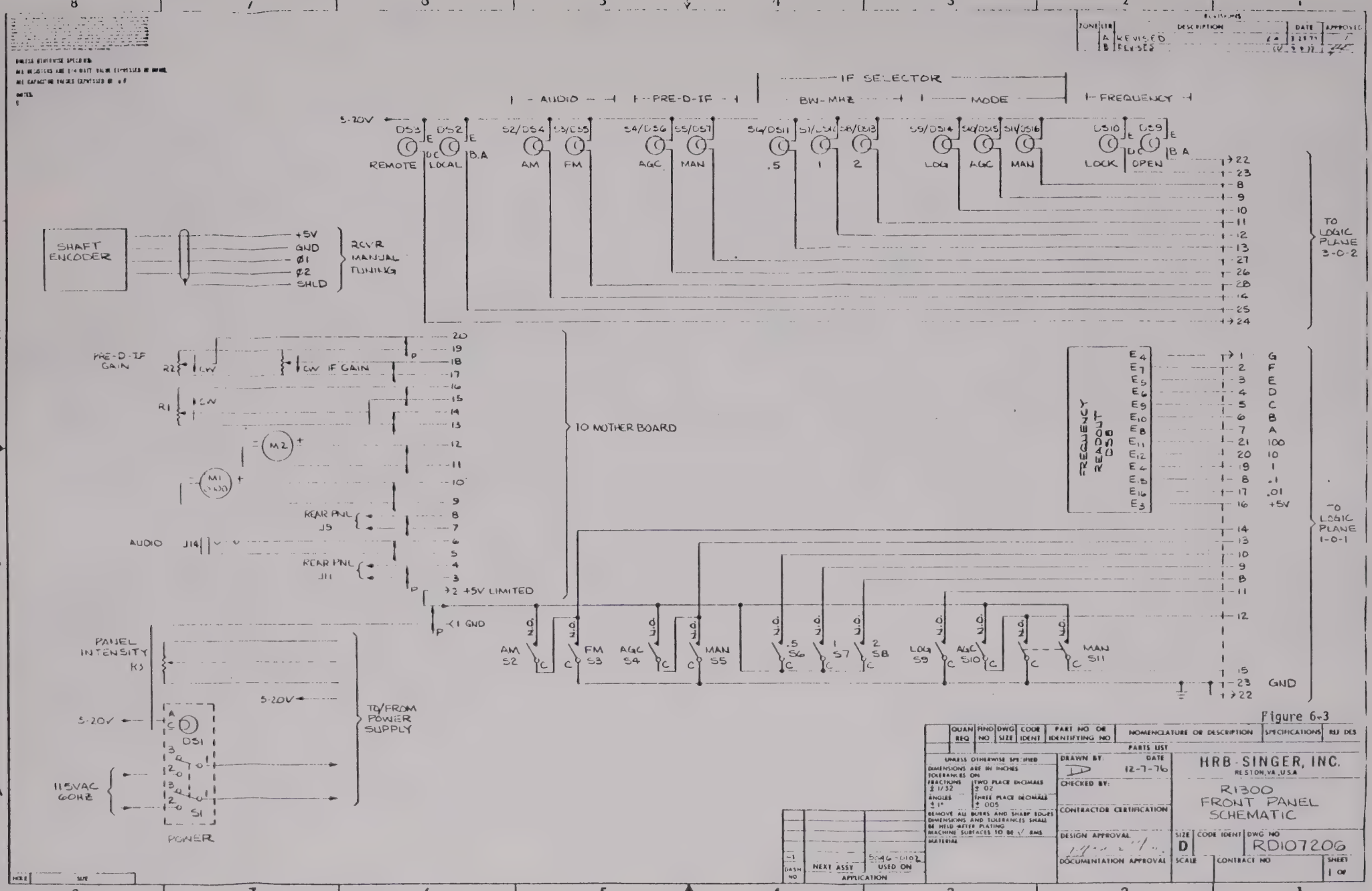


Figure 6-3

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS
MATERIAL

DRAWN BY: D | DATE 12-7-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA., U.S.A.

R1300
FRONT PANEL
SCHEMATIC

SIZE D | CODE IDENT | DWG NO RD107206
SCALE | CONTRACT NO | SHEET 1 OF

-1 DASH NO | NEXT ASSY 5946-0102 USED ON
APPLICATION

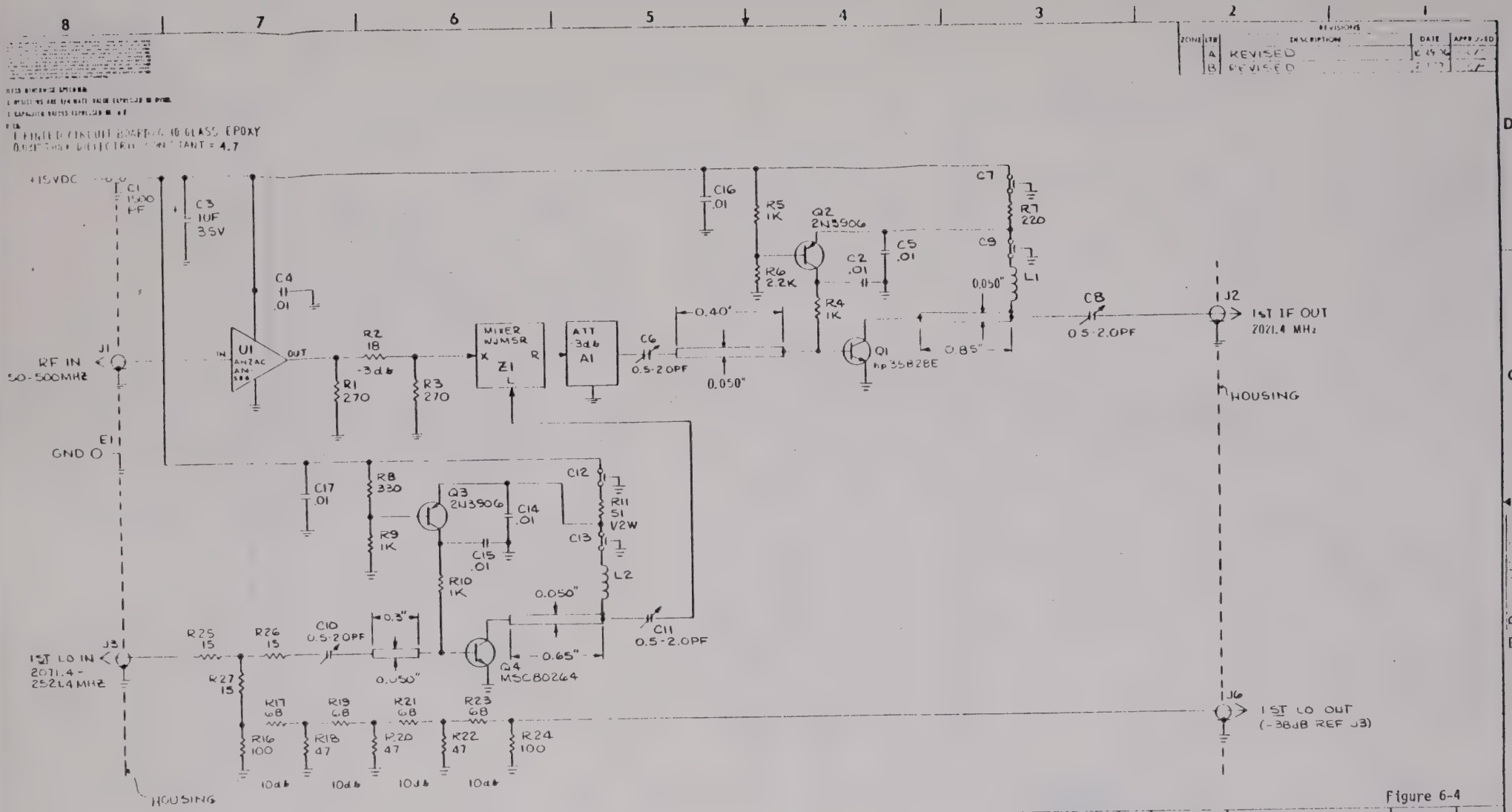


Figure 6-4

ZONE	LTR	REVISIONS DESCRIPTION	DATE	APPROVED
	A	REVISED		
	B	REVISED		

PRINTED CIRCUIT BOARD: 10 GLASS EPOXY
0.062" THICK DIELECTRIC CONSTANT = 4.7

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 — TWO PLACE DECIMALS ± .02
ANGLES ± 1° — THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ... RMS
MATERIAL

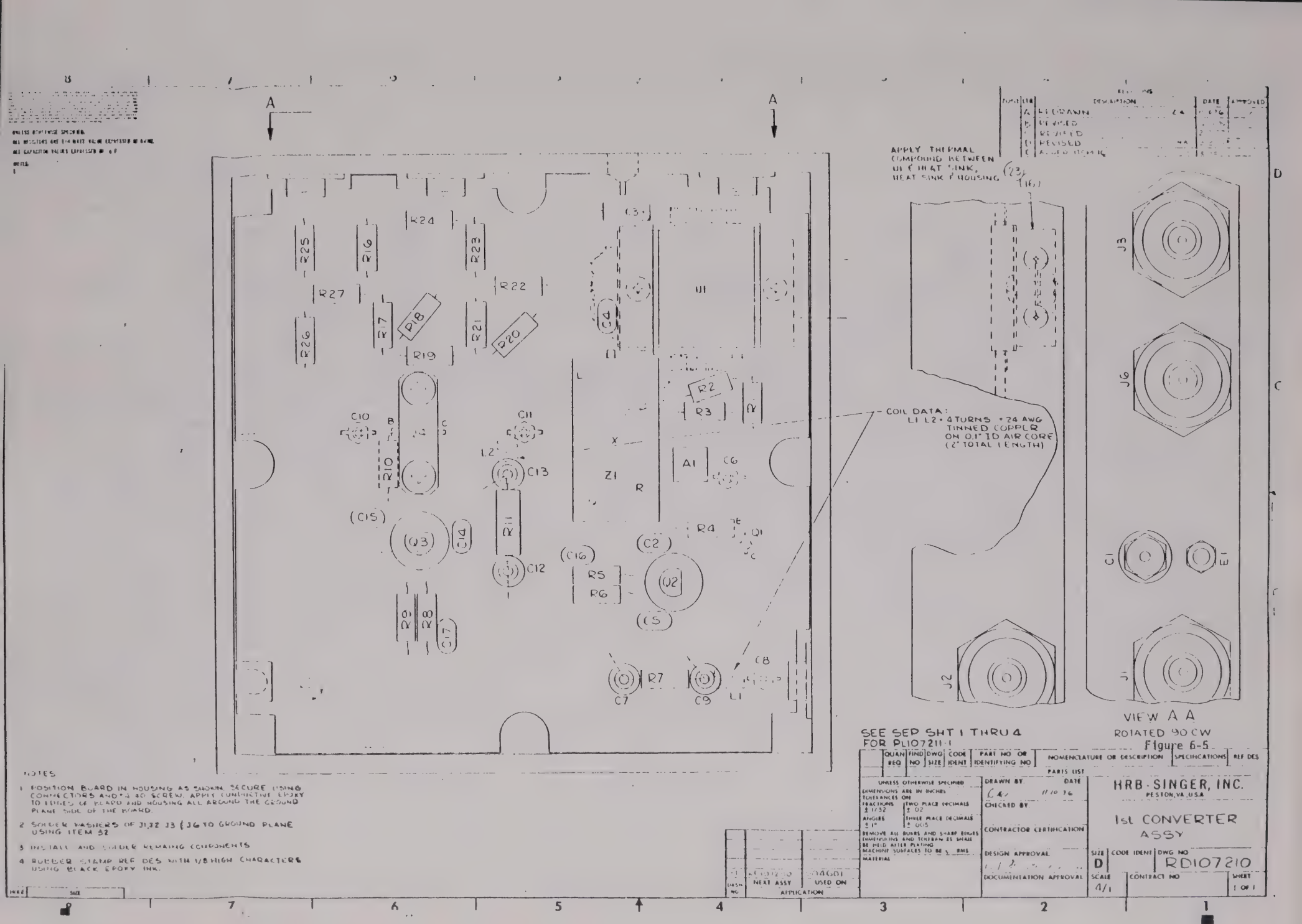
DRAWN BY: GAR — DATE: 8/1776
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA. U.S.A.

1ST CONVERTER SCHEMATIC

SIZE D — CODE IDENT — DWG NO RD107212
SCALE — CONTRACT NO — SHEET OF

ITEM NO	QUANTITY PER NEXT ASSY	USED ON
	APPLICATION	



NOTES

1. POSITION BOARD IN HOUSING AS SHOWN. SECURE USING CONNECTORS AND #4-40 SCREW. APPLY CONDUCTIVE EPOXY TO EDGES OF BOARD AND HOUSING ALL AROUND THE GROUND PLANE SIDE OF THE BOARD.
2. SOLDER WASHERS OF J1,J2 J3 (J6 TO GROUND PLANE USING ITEM 32
3. INSTALL AND SOLDER REMAING COMPONENTS
4. RUBBER STAMP REF DES WITH 1/8 HIGH CHARACTERS USING BLACK EPOXY INK.

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 125 RMS
MATERIAL

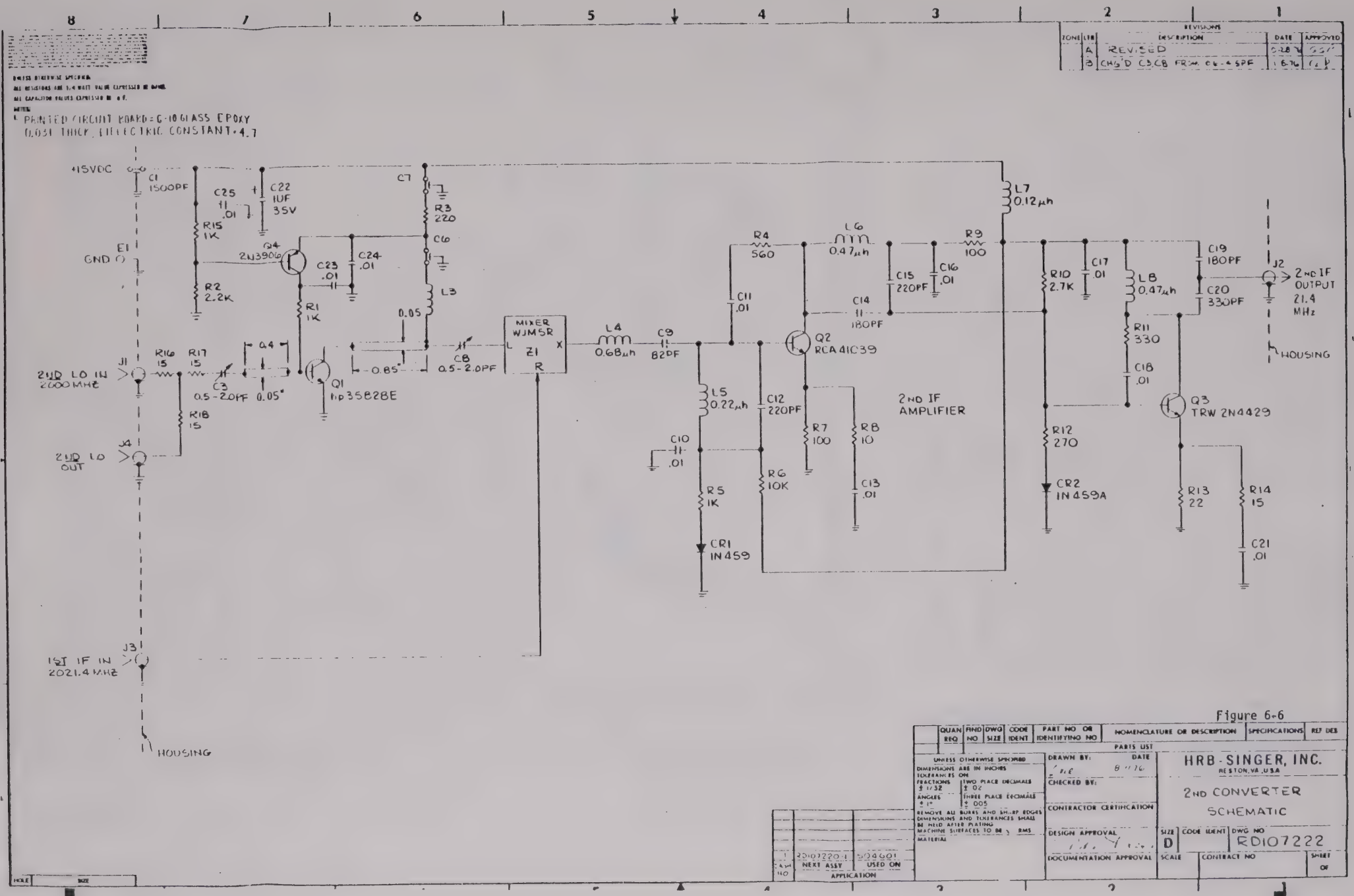
DRAWN BY: [illegible] DATE: 11/10/76
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
PESTON, VA. U.S.A.

1st CONVERTER ASSY

SIZE: D | CODE IDENT | DWG NO: RD107210
SCALE: 4/1 | CONTRACT NO | SHEET 1 OF 1

DASH NO | NEXT ASSY | USED ON APPLICATION



REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
A REVISED
B CHG'D C3,C8 FROM 0.6-4.5PF
PRINTED CIRCUIT BOARD = G-10 GLASS EPOXY
0.031 THICK, DIELECTRIC CONSTANT = 4.7
+15VDC
C1 1500PF
C25 .01
C22 1UF 35V
R15 1K
E1 GND
R2 2.2K
Q4 2N3906
C23 .01
C24 .01
R1 1K
C7
R3 220
C6
L3
0.05
0.85"
C8 0.5-2.0PF
MIXER WJM5R
Z1
L4 0.68μh
C9 82PF
J1 2ND LO IN 2000 MHz
R16 15
R17 15
C3 0.5-2.0PF
0.4
0.05"
Q1 hp35828E
R18 15
J4 2ND LO OUT
J3 1ST IF IN 2021.4 MHz
HOUSING
R4 560
L6 0.47μh
C11 .01
C12 220PF
L5 0.22μh
C10 .01
R5 1K
CR1 IN459
R6 10K
Q2 RCA41C39
R7 100
R8 10
C13 .01
C14 180PF
C15 220PF
C16 .01
R9 100
L7 0.12μh
2ND IF AMPLIFIER
R10 2.7K
C17 .01
R12 270
CR2 IN459A
L8 0.47μh
R11 330
C18 .01
C19 180PF
C20 330PF
Q3 TRW 2N4429
R13 22
R14 15
C21 .01
J2 2ND IF OUTPUT 21.4 MHz
HOUSING
QUAN REQ
FIND NO
DWG SIZE
CODE IDENT
PART NO OR IDENTIFYING NO
NOMENCLATURE OR DESCRIPTION
SPECIFICATIONS
REF DES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE RMS
MATERIAL
DRAWN BY:
DATE
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA., U.S.A.
2ND CONVERTER SCHEMATIC
SIZE D
CODE IDENT
DWG NO RD107222
SCALE
CONTRACT NO
SHEET OF
1 RD107220-1 504601
NEXT ASSY
USED ON
APPLICATION

Figure 6-6

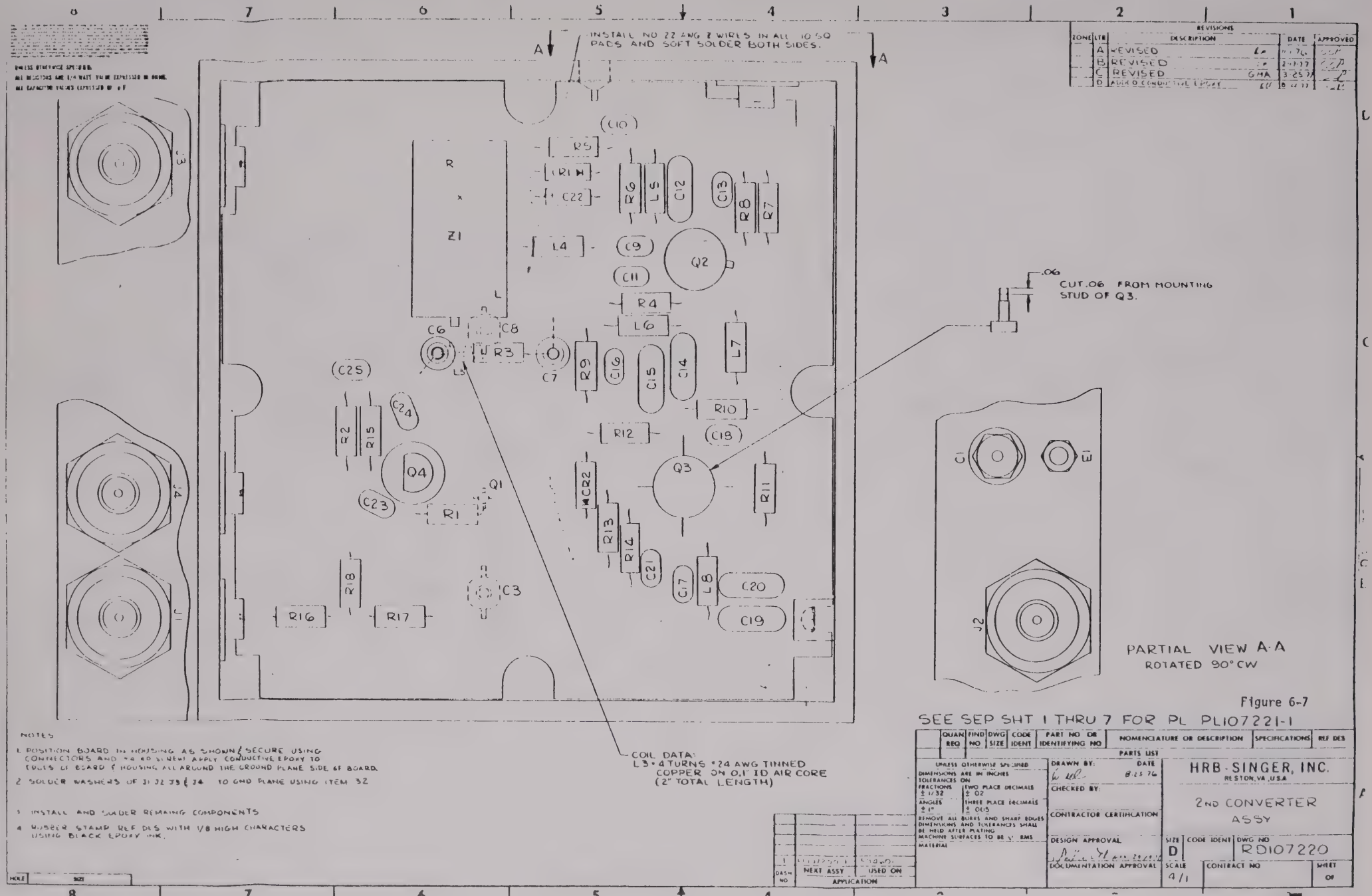


Figure 6-7

SEE SEP SHT 1 THRU 7 FOR PL PL107221-1

NOTES

1. POSITION BOARD IN HOUSING AS SHOWN & SECURE USING CONNECTORS AND #6-40 SCREWS. APPLY CONDUCTIVE EPOXY TO EDGES OF BOARD & HOUSING ALL AROUND THE GROUND PLANE SIDE OF BOARD.
2. SOLDER WASHERS OF J1 J2 J3 & J4 TO GND PLANE USING ITEM 32
3. INSTALL AND SOLDER REMAING COMPONENTS
4. HUSSER STAMP REF DES WITH 1/8 HIGH CHARACTERS USING BLACK EPOXY INK.

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED		
	B	REVISED		
	C	REVISED	3-25-77	
	D	ADD'D CONDUCTIVE EPOXY		

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 125 RMS
MATERIAL

DRAWN BY: DATE 8-25-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA., U.S.A.

2ND CONVERTER ASSY

SIZE D | CODE IDENT | DWG NO RD107220
SCALE 4/1 | CONTRACT NO | SHEET 09

DASH NO	NEXT ASSY	USED ON APPLICATION
1		

HOLE | SIZE

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED	6 28 76	GC
	B	REVISED GMA	3 25 77	GP

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN pF
NOTES:
1. PRINTED CIRCUIT BOARD: G10 GLASS EPOXY
0.061" THICK, DIELECTRIC CONSTANT = 4.7

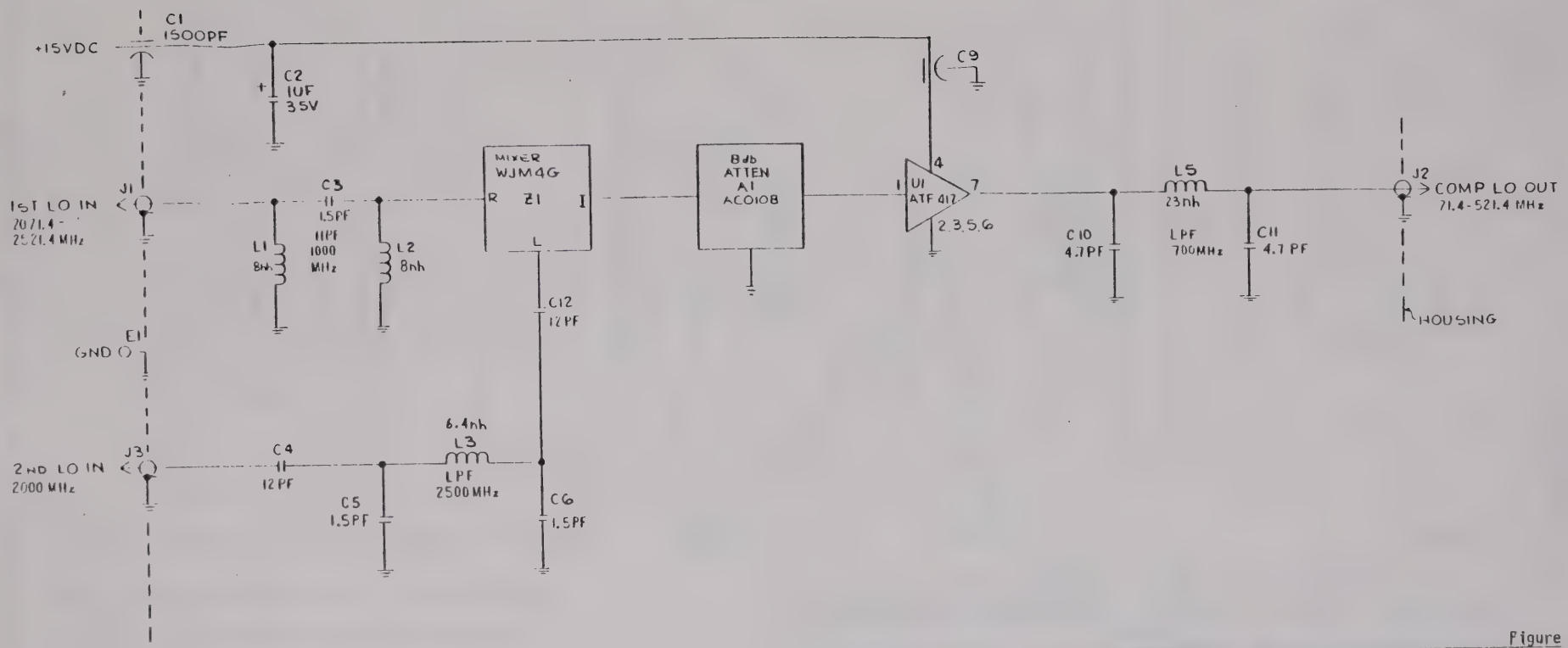


Figure 6-8

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
				PARTS LIST			

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ✓ RMS
MATERIAL

DRAWN BY: DATE 8/17/76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA. U.S.A.

3RD CONVERTER SCHEMATIC

SIZE D | CODE IDENT | DWG NO. 2D107232
SCALE | CONTRACT NO. | SHEET 1 of 1

LAST NO	NEXT ASSY	USED ON
1	2D107235-1	5046.01
	APPLICATION	

NEXT ASSY

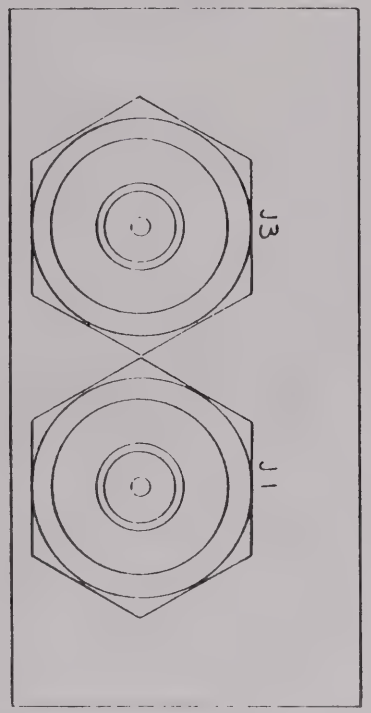
UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

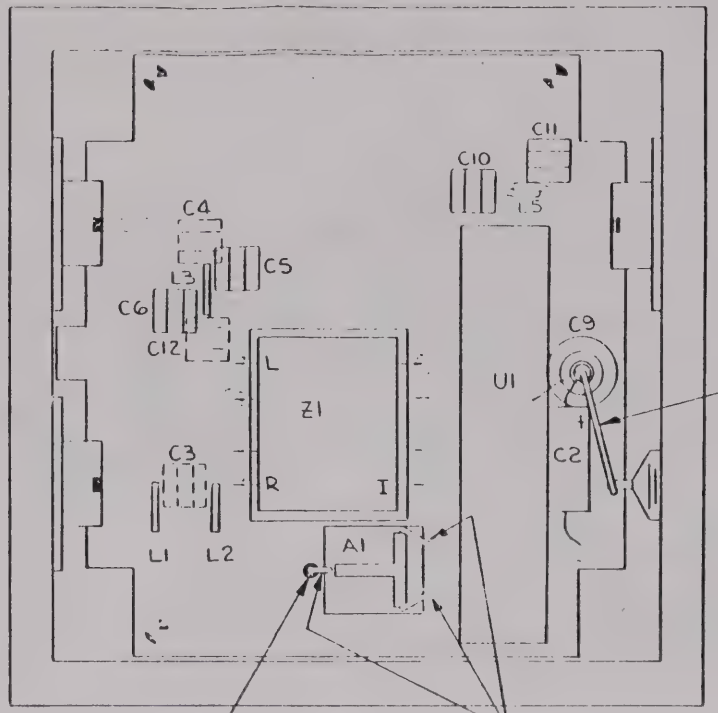
COIL DATA

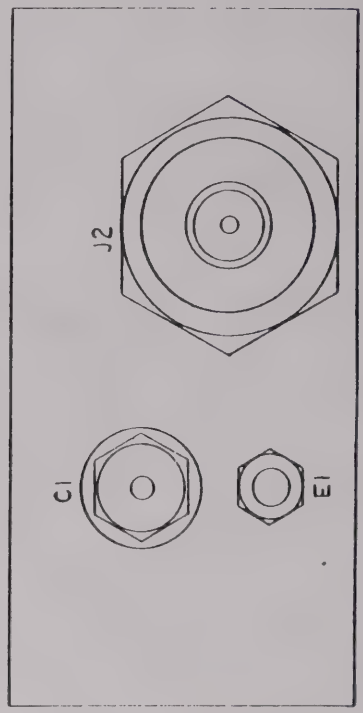
L5	.20	.10 ID	2 TURNS #20 AWG TINNED COPPER
L1, L2	.20		#20 AWG TINNED COPPER
L3	.10		#20 AWG TINNED COPPER

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED GM	2-16-77	
	B	REVISED GMA	3-25-77	
	C	REVISED GM	9-2-77	







SOLDER TO GROUND PLANE

#20 AWG TINNED COPPER

Figure 6-9

NOTES:

1. POSITION BOARD IN HOUSING AS SHOWN, SECURE USING CONNECTORS
2. SOLDER WASHERS OF J1, J2 AND J3 TO GROUND PLANE USING ITEM 32
3. SILVER SOLDER C3 THRU C8, C10 AND C11 AS SHOWN USING ITEM 34
4. INSTALL AND SOLDER REMAING COMPONENTS
5. RUBBER STAMP REF DES WITH 1/8 HIGH CHARACTERS USING BLACK EPOXY INK.
6. INSTALL 20 GAGE BUS WIRE IN C9 AND CONNECT TO C1 ON NEARSIDE.
7. POSITION BOARD IN HOUSING AS SHOWN. SECURE USING CONNECTORS AND 4-40 SCREWS. APPLY CONDUCTIVE EPOXY TO EDGES OF BOARD & HOUSING ALL AROUND THE GROUND PLANE SIDE OF BOARD.

HOLE	SIZE

SEE SEP SHT 1 THRU FOR PL PL107231-1

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
PARTS LIST							

DASH NO.	NEXT ASSY	USED ON
-1	RE107200-1	S04601
APPLICATION		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON
FRACTIONS ±1/32 | TWO PLACE DECIMALS ±.02
ANGLES ±1° | THREE PLACE DECIMALS ±.005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: G. KR. DATE 8 20 76
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: G. Peffer Nov. 29, 76
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

3RD CONVERTER ASSY

SIZE	CODE IDENT	DWG NO.
C		RC107230

SCALE	CONTRACT NO.	SHEET
4/1		OF

RC107230

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	ADDED C5,C6,C7	9-9-77	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT: VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.
NOTES:
1.

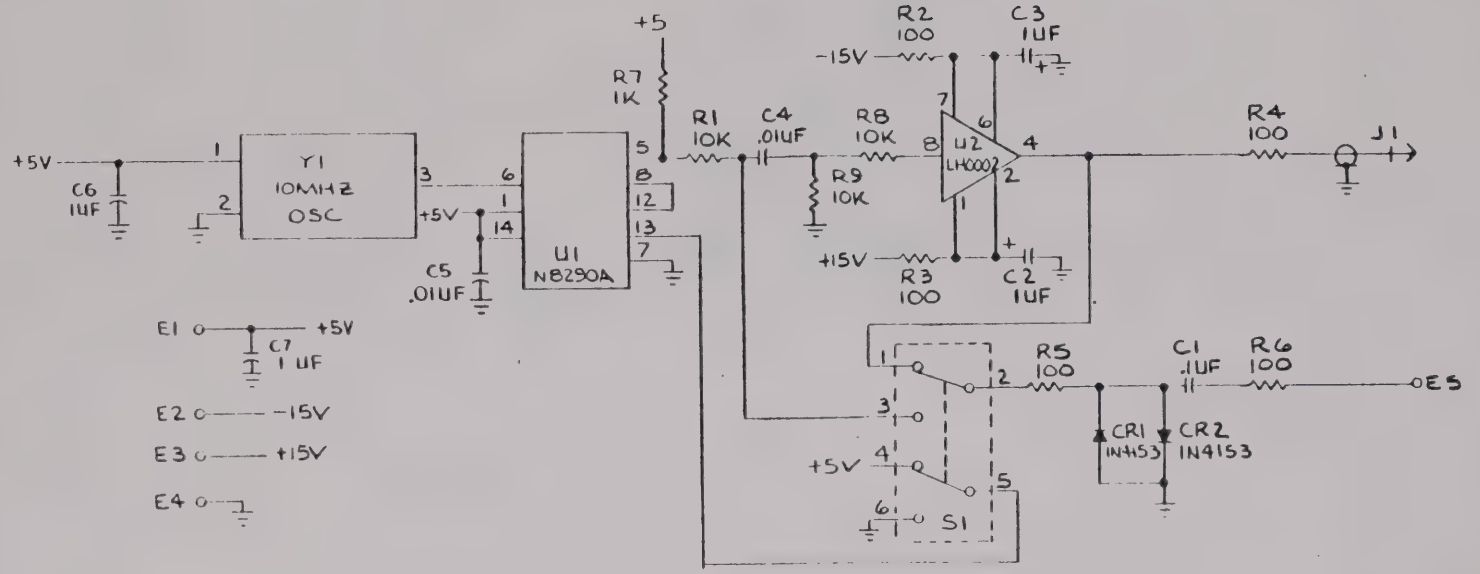


Figure 6-10

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: ROCKEY DATE 12-16-76
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 1/4/77
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

SCHEMATIC DIAGRAM
REFERENCE OSC

SIZE	CODE IDENT	DWG NO.
C		RC107342

SCALE ~ | CONTRACT NO. | SHEET 1 OF 1

DASH NO.	NEXT ASSY	USED ON
-1	RC107340-1	5046

APPLICATION

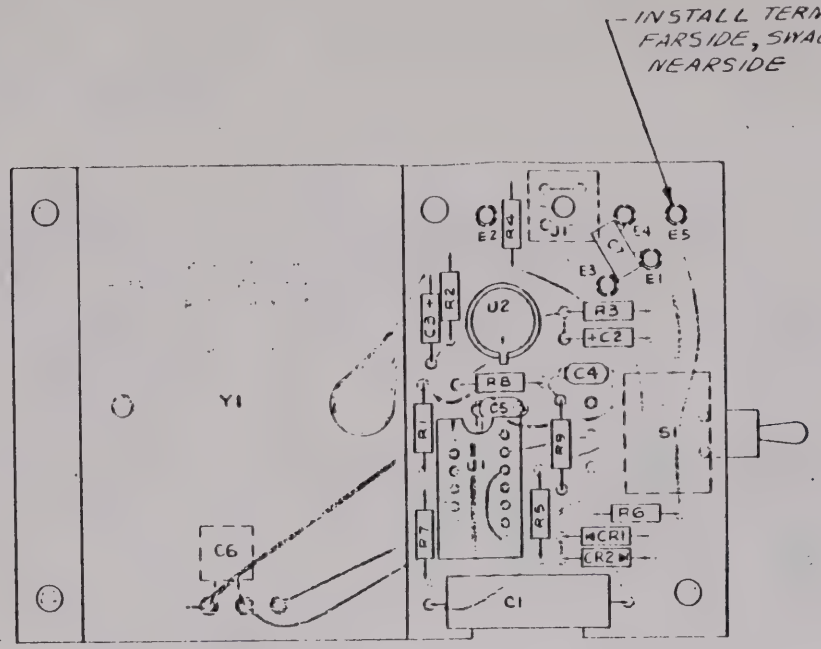
HOLE	SIZE

RC107342 C

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED	9-8-77	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN u F.

NOTES:
1. SCHEMATIC RC107342 (REF)
2. INSTALL NO.22 AWG Z WIRE IN ALL .095 SQ. PADS AND SOFT SOLDER BOTH SIDES.



RC107340

Figure 6-11

SEE SEP SHT 1 THRU 3 FOR PL107341

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

-1	RE107202-1	5046
DASH NO.	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: J. ARVAI DATE 1-7-77
CHECKED BY: D. CARROLL 1-7-77
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 1/7/77
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

P.C. ASSY
REFERENCE OSC.

SIZE	CODE IDENT	DWG NO.
C		RC107340

SCALE	CONTRACT NO.	SHEET
2:1		1 OF 1

HOLE	SIZE

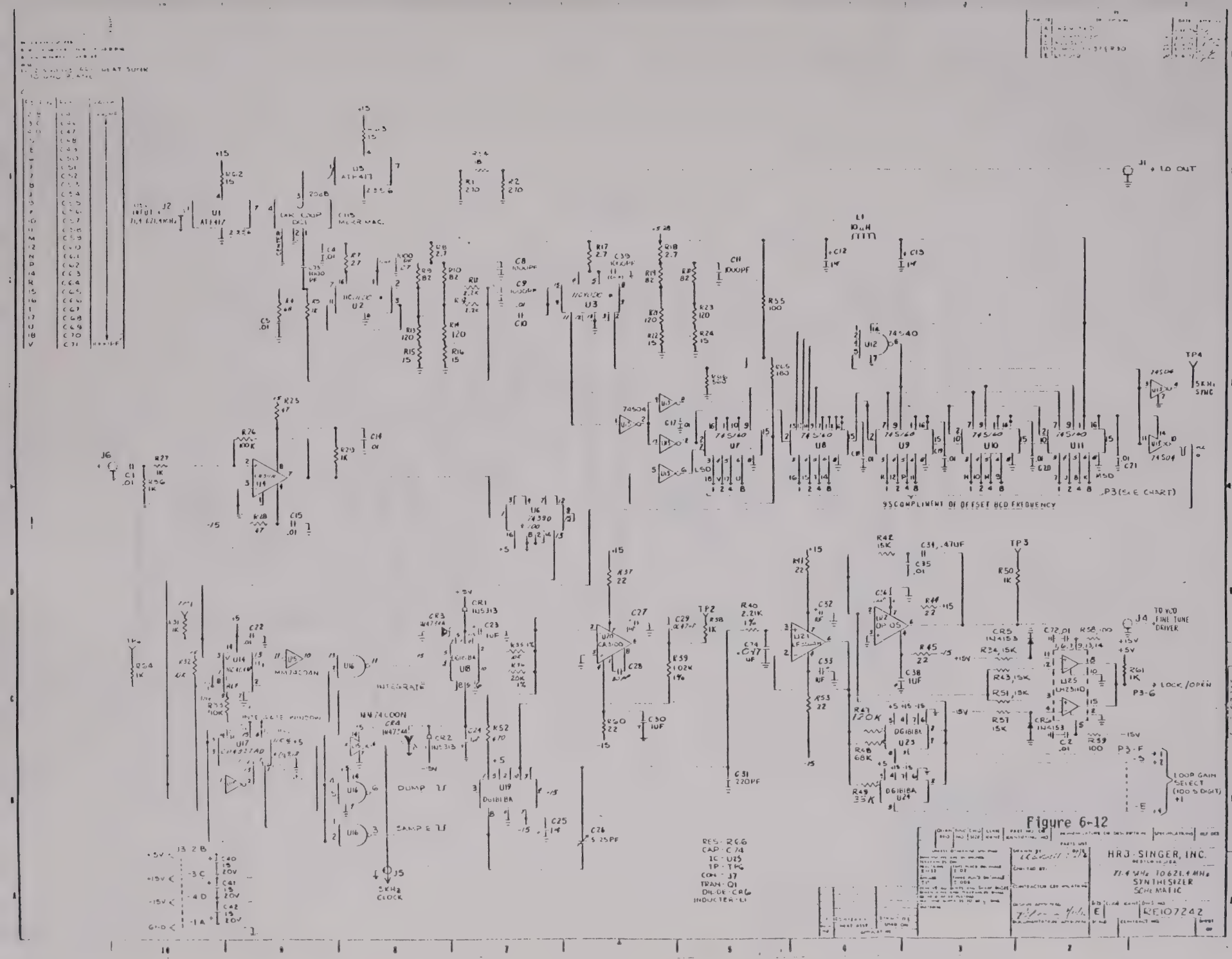
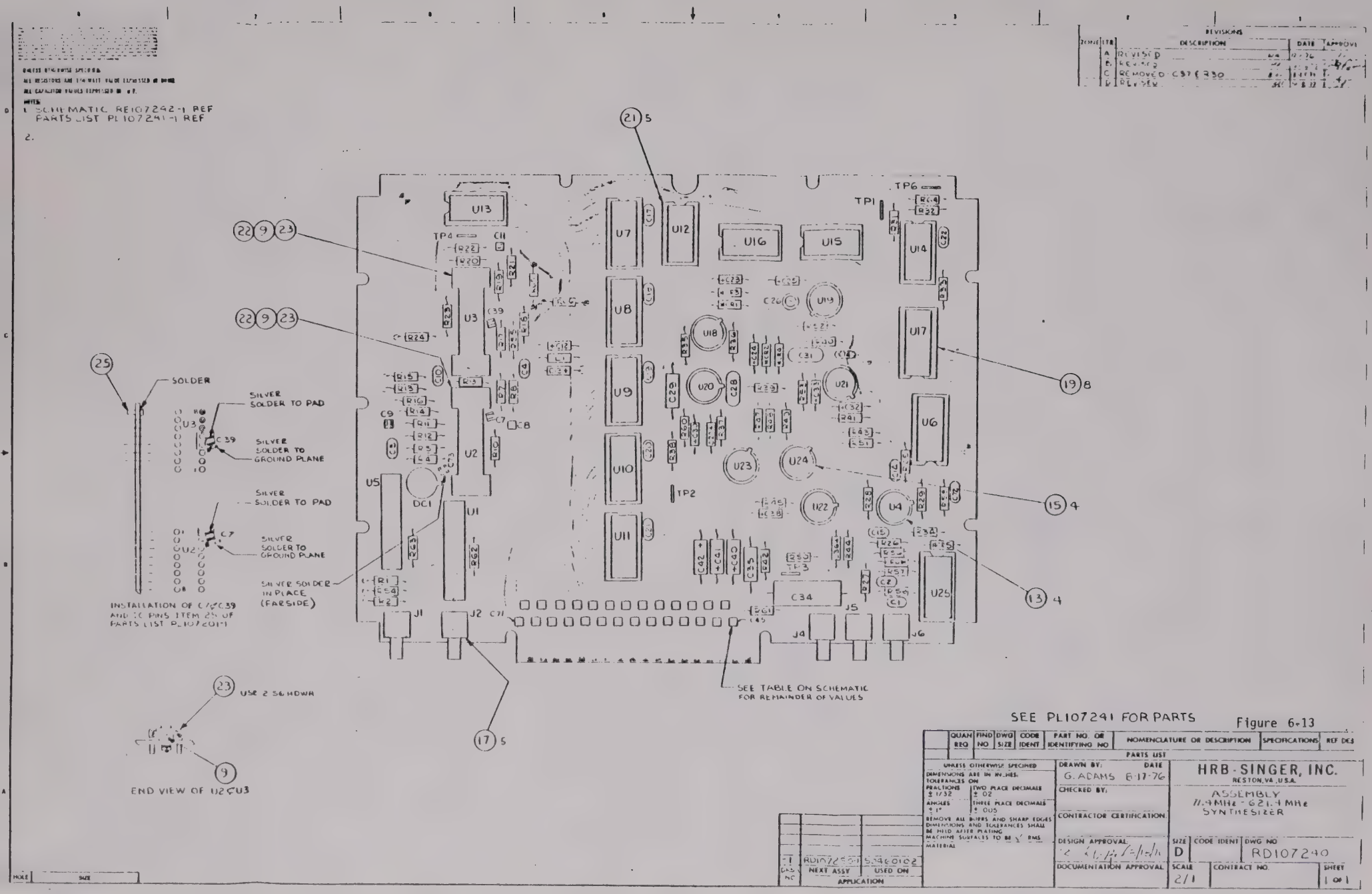

HR3 SINGER, INC.
SYNTHESIZER
SCHEMATIC
RE107242
RES - R66
CAP - C74
IC - U25
TP - TP6
CON - J7
TRAN - Q1
DIODE - CR6
INDUCTOR - L1
LOOP GAIN SELECT (100 S DIGIT)
TO VCO FINE TUNE DRIVER
LOCK/OPEN
9S COMPLIMENT OF OFFSET BCD FREQUENCY
P3 (SEE CHART)
INTEGRATE
DUMP
SAMPLE
SKHz CLOCK
LO OUT
SKHz SYNC

Figure 6-12



REVISIONS
ZONE | LTR | DESCRIPTION | DATE | APPROVAL
A REVISED
B REVISED
C REMOVED C37 & R30
D REVISED
1. SCHEMATIC RE107242-1 REF
PARTS LIST PL107241-1 REF
2.
SOLDER
SILVER SOLDER TO PAD
SILVER SOLDER TO GROUND PLANE
SILVER SOLDER TO PAD
SILVER SOLDER TO GROUND PLANE
SILVER SOLDER IN PLACE (FARSIDE)
INSTALLATION OF C7 & C39 AND IC PINS ITEM 25 OF PARTS LIST PL107201-1
USE 2 56 HDWR
END VIEW OF U2 & U3
SEE TABLE ON SCHEMATIC FOR REMAINDER OF VALUES
SEE PL107241 FOR PARTS
Figure 6-13
QUAN REQ | FIND NO | DWG SIZE | CODE IDENT | PART NO. OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | SPECIFICATIONS | REF DES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 1/ RMS
MATERIAL
DRAWN BY: G. ADAMS DATE 6-17-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA., U.S.A.
ASSEMBLY
11.4 MHz - 621.4 MHz
SYNTHESIZER
SIZE D
CODE IDENT
DWG NO RD107240
SCALE 2/1
CONTRACT NO.
SHEET 1 OF 1
-1 RD107250-1 S0460102
DAS NO
NEXT ASSY
USED ON
APPLICATION

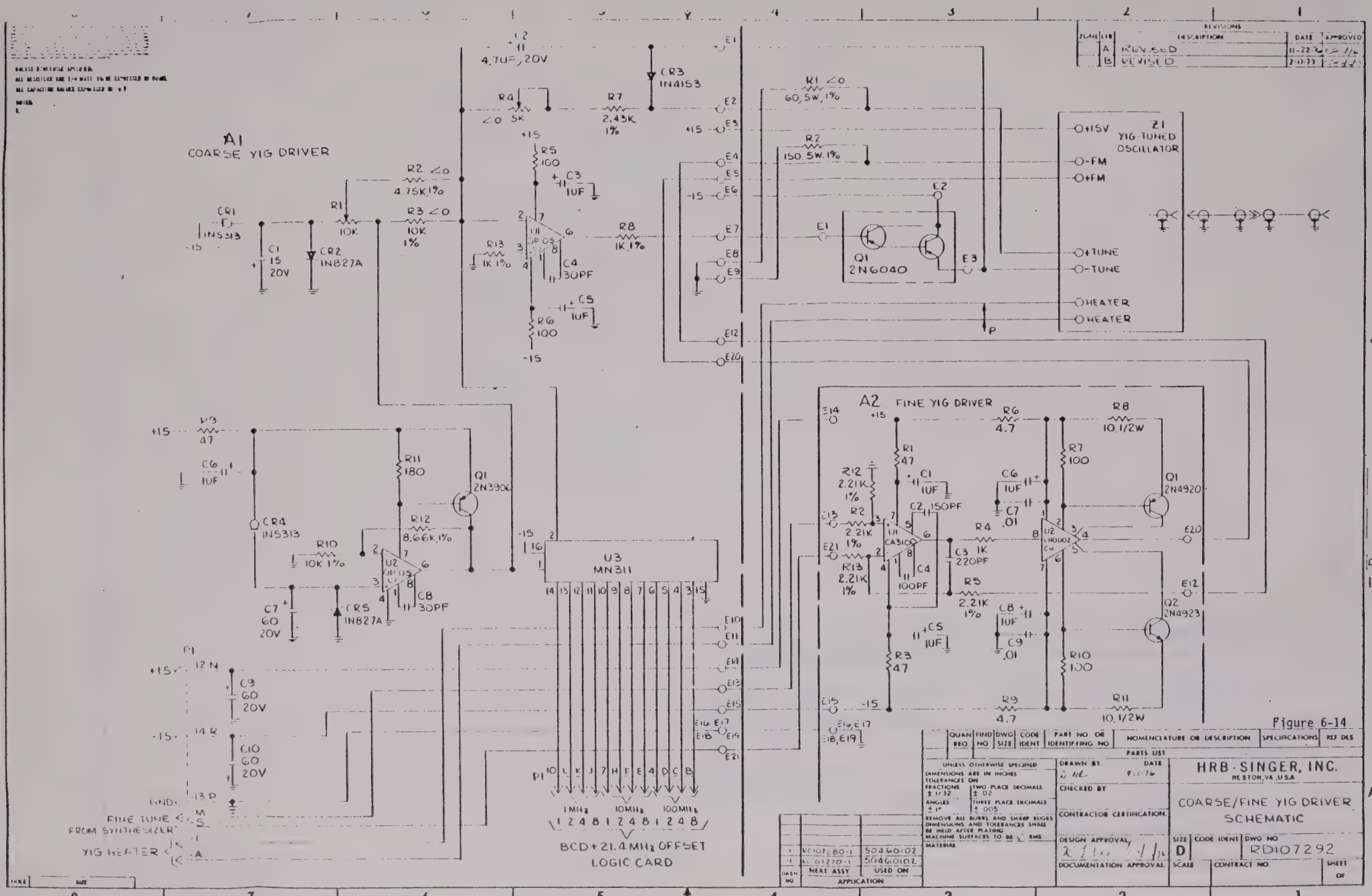


Figure 6-14

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

DASH NO	NEXT ASSY	USED ON
-1	RC107280-1	50460102
-1	LL 03270-1	50460102

APPLICATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 — TWO PLACE DECIMALS ± .02
ANGLES ± 1° — THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 125 RMS
MATERIAL

DRAWN BY: DATE 9-15-76
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA. U.S.A.

COARSE/FINE YIG DRIVER SCHEMATIC

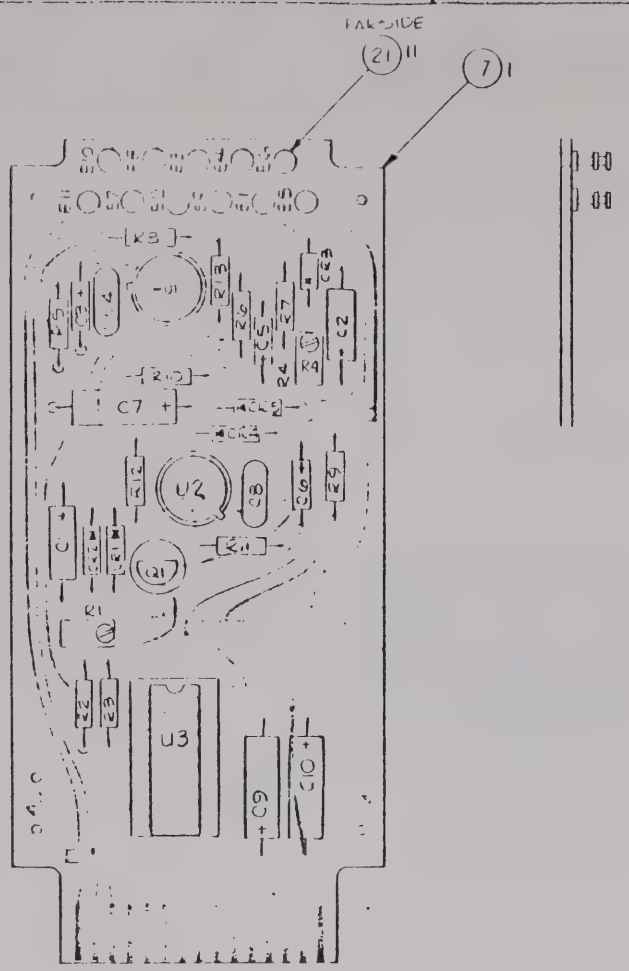
SIZE	CODE IDENT	DWG NO
D		RD107292

SCALE | CONTRACT NO. | SHEET OF

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED	11-22-76	
	B	REVISED	2-10-77	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED CLP	11/29/76	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT: VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.
NOTES:
1. SCHEMATIC RD107292 REF



6-15A

SEE SEP SHT 1 THRU 4 FOR PL PL107271

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
PARTS LIST							

DASH NO	NEXT ASSY	USED ON
-1	RD107260-1	50460102
APPLICATION		

HOLE	SIZE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: DATE 9-20-76
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 9/21/76
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

COARSE YIG DRIVER ASSY

SIZE	CODE IDENT	DWG NO.
C		RC107270

SCALE	CONTRACT NO.	SHEET
2/1		1 OF 1

RC107270-1

4 3 2 1

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED CLP	11/29/76	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.
NOTES:
1. SCHEMATIC RD107292-1 REF

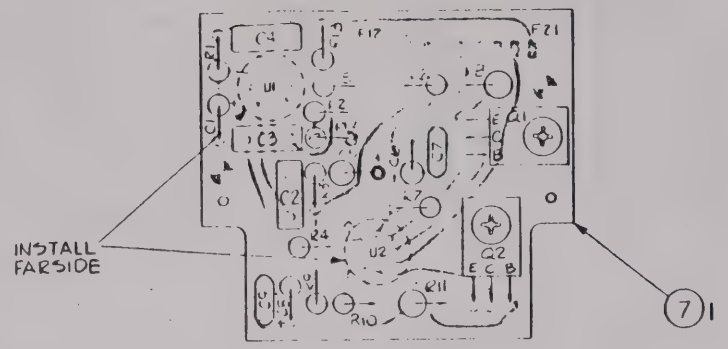


Figure 6-15B

SEE SEP SHT 1 THRU 4 FOR PL PL107281

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
					PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ±.02
ANGLES ±1° | THREE PLACE DECIMALS ±.005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: DATE 9-20-76
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 9/22/76
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA, U.S.A.

FINE YIG DRIVER ASSY

SIZE C | CODE IDENT | DWG NO. RC107280
SCALE 2/1 | CONTRACT NO. | SHEET 1 OF 1

DASH NO	NEXT ASSY	USED ON
-1	RD107260-1	50460102
APPLICATION		

HOLE	SIZE

RC107280

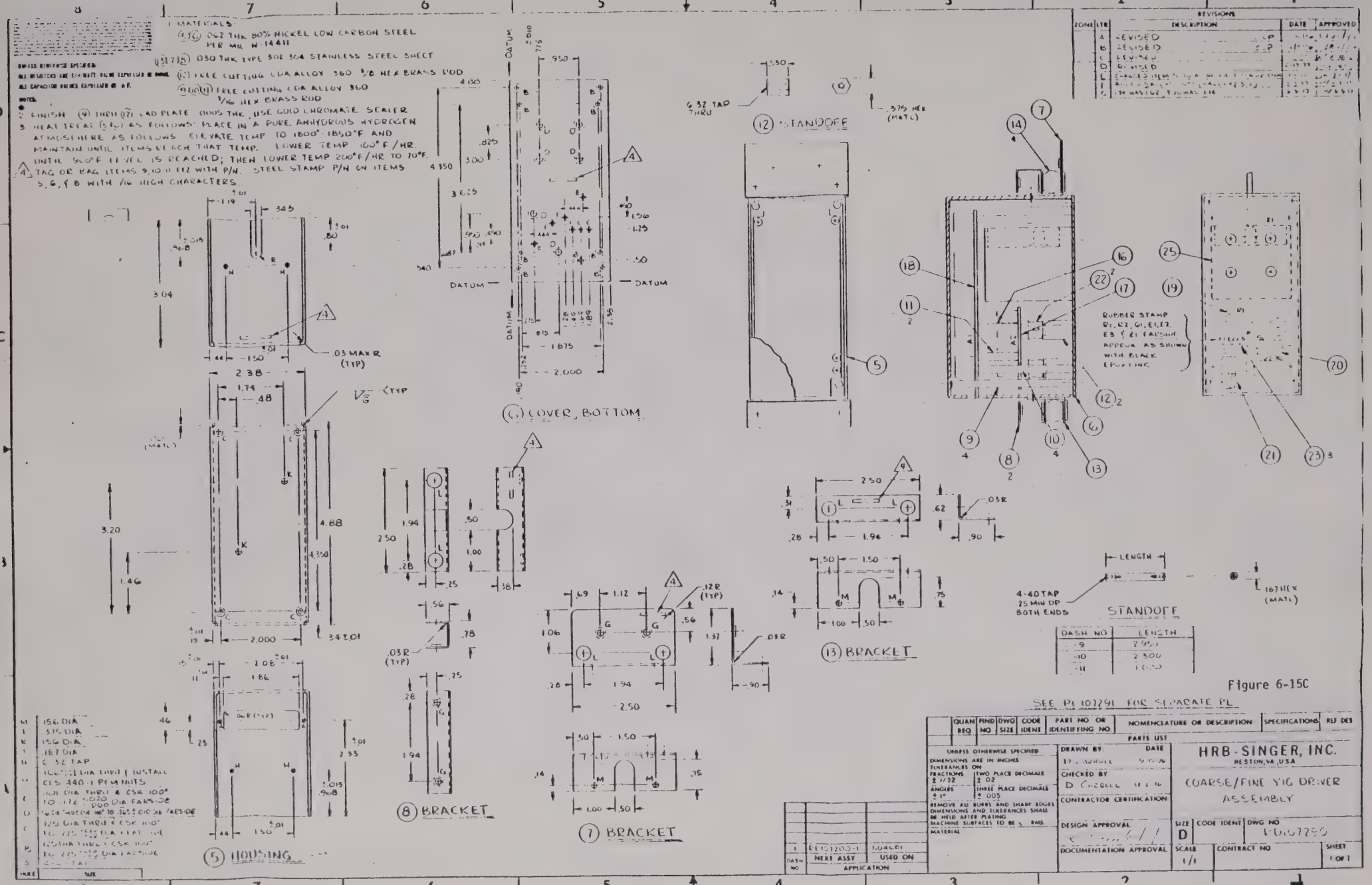

1. MATERIALS:
(6)(16) .062 THK 80% NICKEL LOW CARBON STEEL PER MIL N-14411
(1)(7)(15) .030 THK TYPE 302 3/4 STAINLESS STEEL SHEET
(2) FREE CUTTING CDA ALLOY 360 3/8 HEX BRASS ROD
(3)(4)(9)(10)(11) FREE CUTTING CDA ALLOY 360 3/16 HEX BRASS ROD
NOTES:
2. FINISH (4) THRU (17) CAD PLATE .0005 THK, USE GOLD CHROMATE SEALER
3. HEAT TREAT (5)(6) AS FOLLOWS: PLACE IN A PURE ANHYDROUS HYDROGEN ATMOSPHERE AS FOLLOWS: ELEVATE TEMP TO 1800°-1850°F AND MAINTAIN UNTIL ITEMS REACH THAT TEMP. LOWER TEMP 100°F/HR. UNTIL 900°F LEVEL IS REACHED; THEN LOWER TEMP 200°F/HR TO 70°F.
4. TAG OR BAG ITEMS 9,10 & 11 WITH P/N. STEEL STAMP P/N ON ITEMS 5, 6, & 8 WITH .06 HIGH CHARACTERS.
(5) HOUSING
(8) BRACKET
(7) BRACKET
(6) COVER, BOTTOM
(12) STANDOFF
(13) BRACKET
STANDOFF
DASH NO | LENGTH
-9 | 2.950
-10 | 2.500
-11 | 1.000
RUBBER STAMP R1, R2, G1, E1, E2, E3 & Z1 FACES AS SHOWN WITH BLACK EPOXY INK
REVISIONS
ZONE | LTR | DESCRIPTION | DATE | APPROVED
A REVISED
B REVISED
C REVISED
D REVISED
E CHANGED ITEM 5 TO A
F ADDED 2 PLACES
G ITEM 16 WAS 6, 9 WAS 8 &
SEE PL 107291 FOR SEPARATE PL
QUAN REQ | FIND NO | DWG SIZE | CODE IDENT | PART NO OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | SPECIFICATIONS | REF DES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINED SURFACES TO BE 63 RMS
MATERIAL
DRAWN BY: D. CARROLL DATE 9/6/76
CHECKED BY D. CARROLL 9/6/76
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA. U.S.A.
COARSE/FINE YIG DRIVER ASSEMBLY
SIZE D | CODE IDENT | DWG NO PD107290
SCALE 1/1 | CONTRACT NO | SHEET 1 OF 1
DASH NO | 1
NEXT ASSY | PD107200-1
USED ON | PD106101
APPLICATION

Figure 6-15C

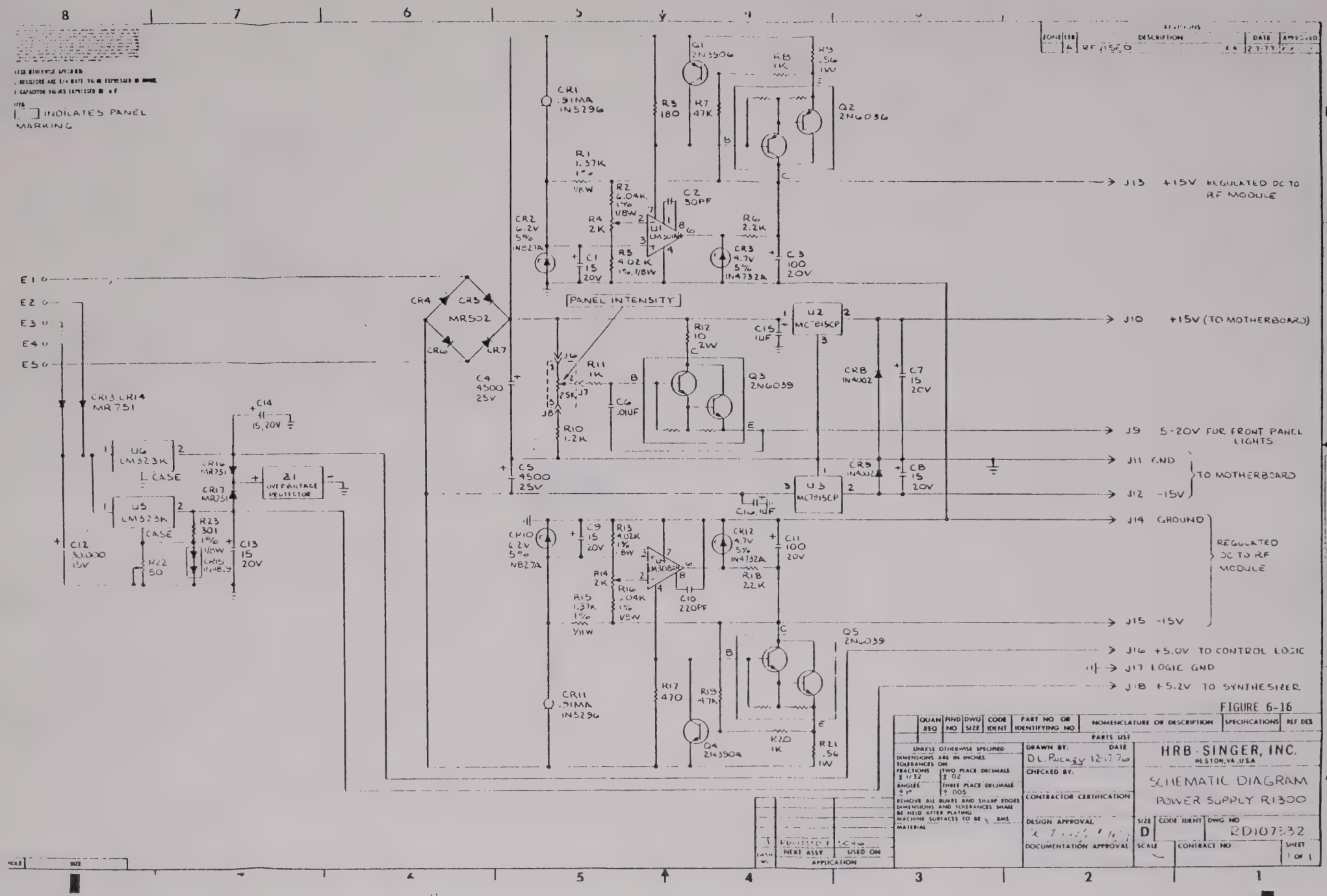


FIGURE 6-16

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ~ RMS
MATERIAL

DRAWN BY: D.L. Puckey DATE 12-17-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA. U.S.A.

SCHEMATIC DIAGRAM
POWER SUPPLY R1300

SIZE D | CODE IDENT | DWG NO 2D107332
SCALE ~ | CONTRACT NO | SHEET 1 OF 1

NEXT ASSY | USED ON
APPLICATION

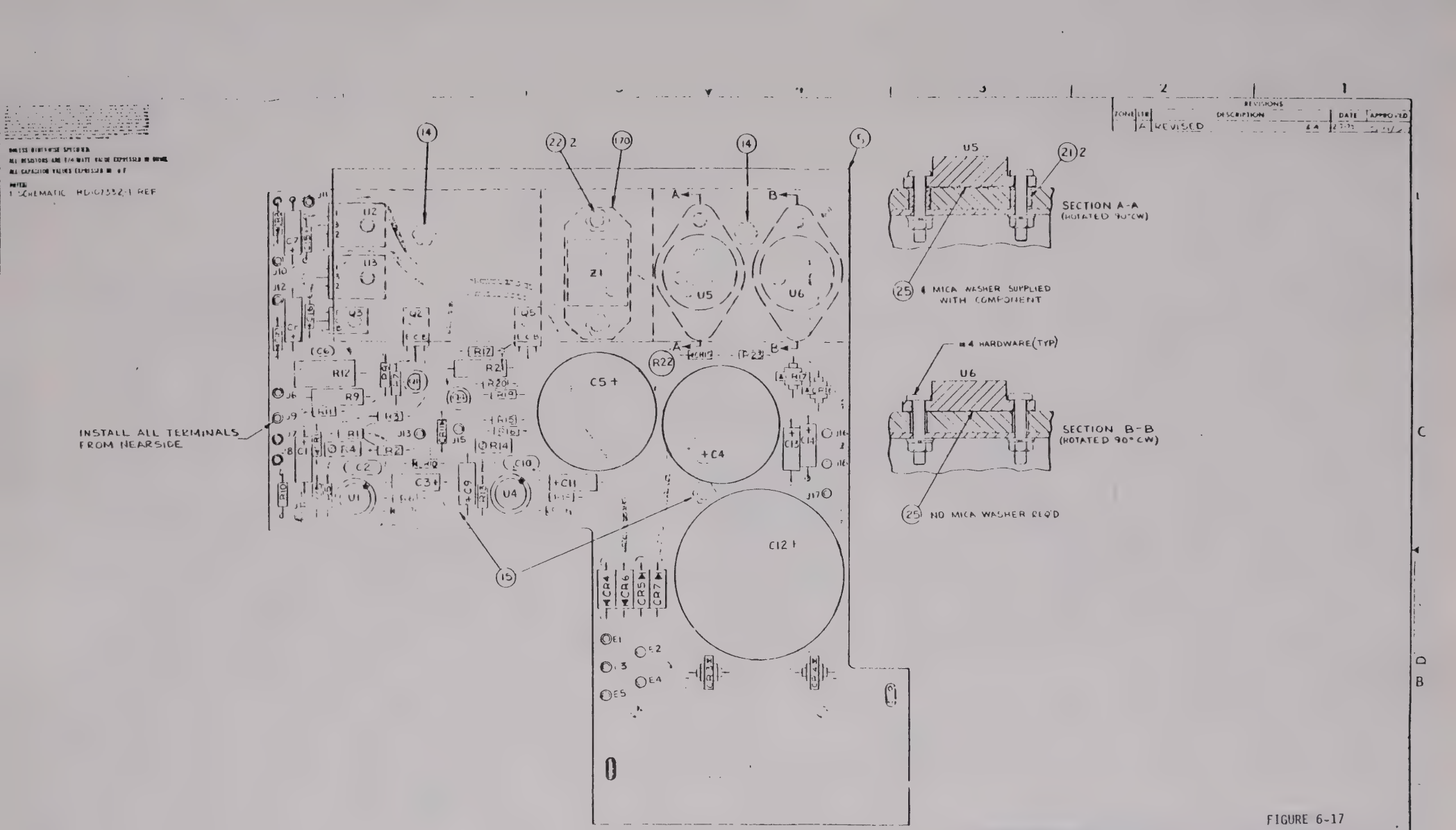
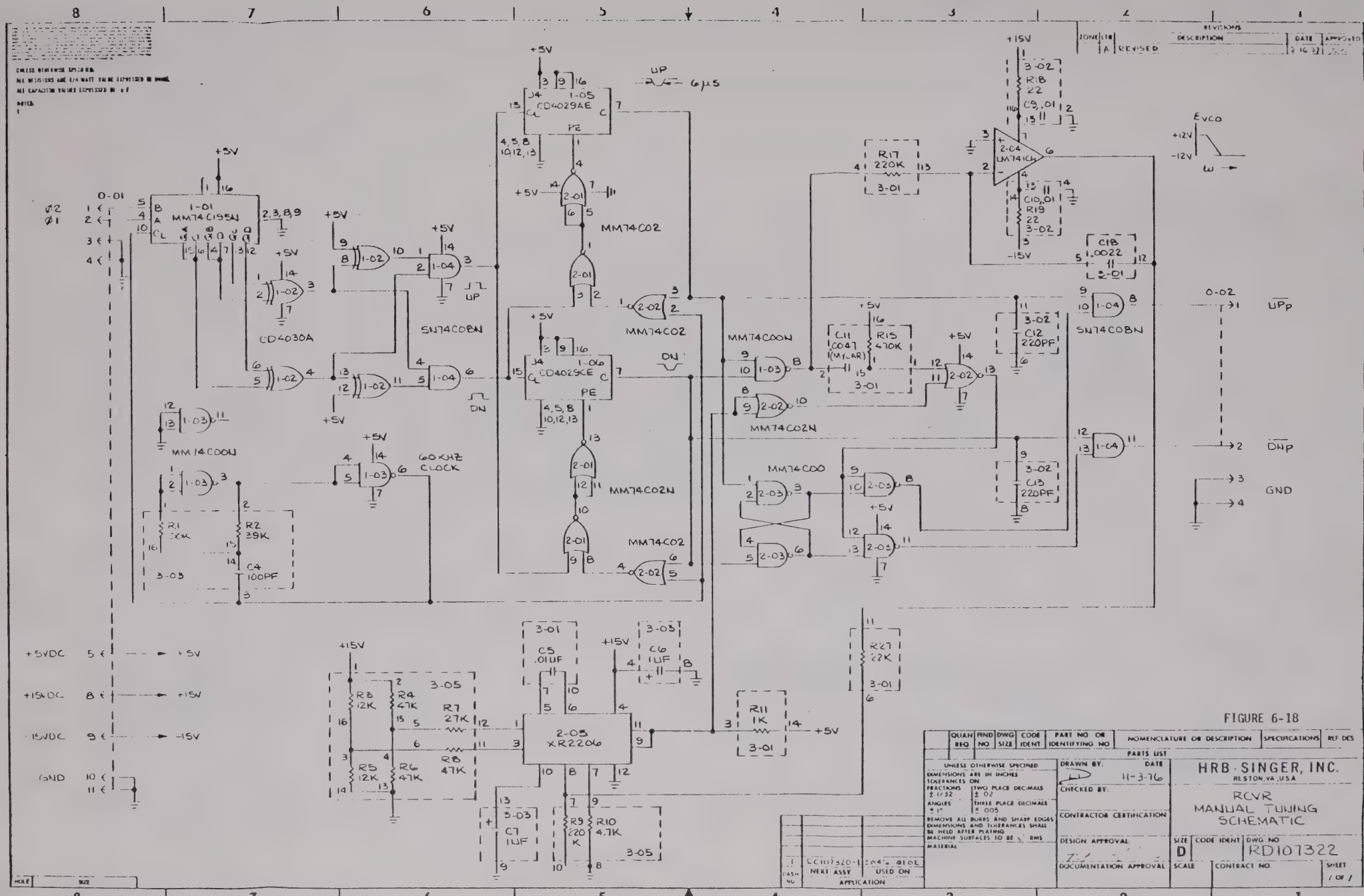
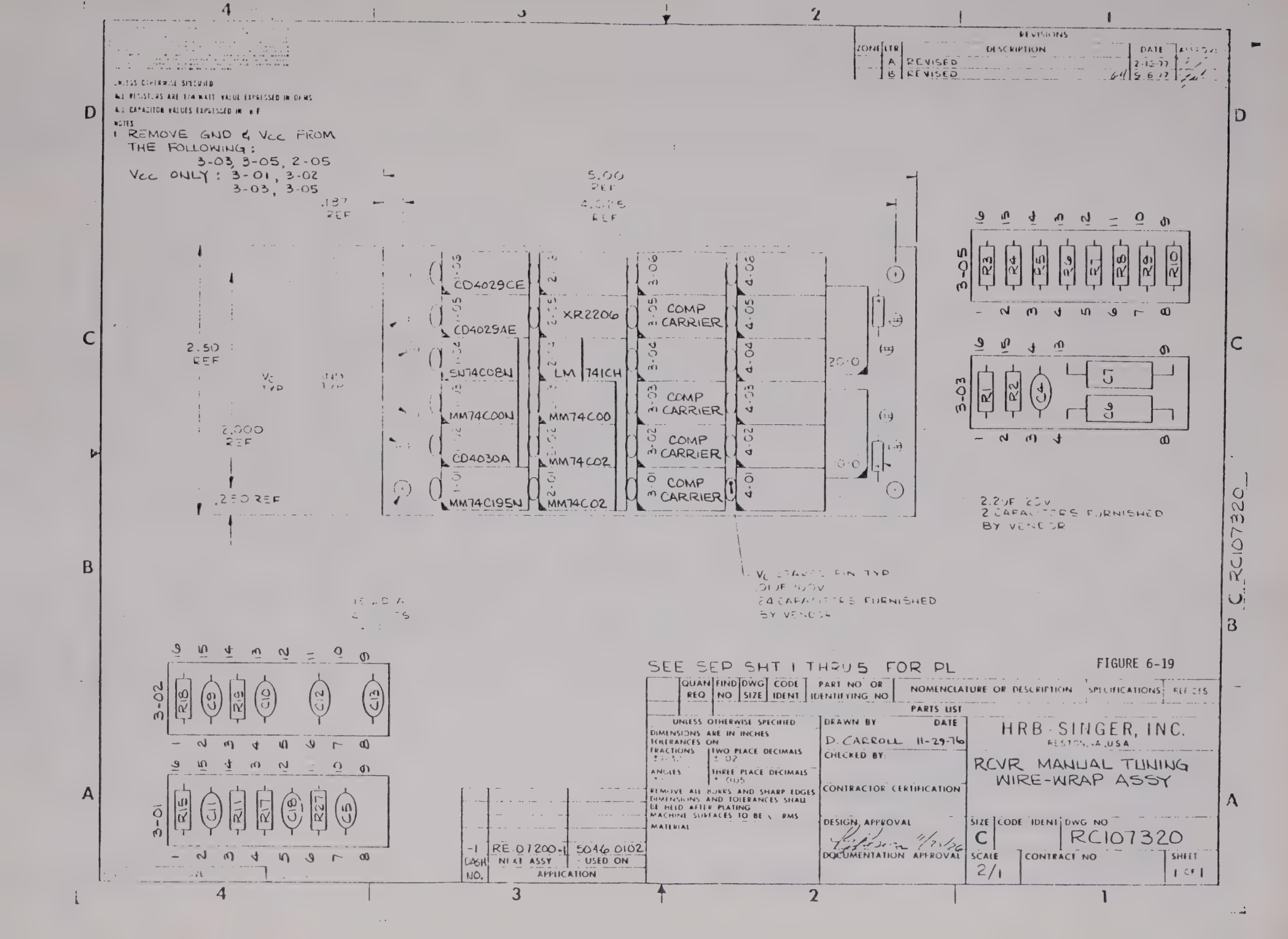

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN uF
NOTES:
1. SCHEMATIC RD107332-1 REF
INSTALL ALL TERMINALS FROM NEARSIDE
SECTION A-A (ROTATED 90°CW)
MICA WASHER SUPPLIED WITH COMPONENT
4 HARDWARE(TYP)
SECTION B-B (ROTATED 90° CW)
NO MICA WASHER REQ'D
REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
A REVISED
PARTS LIST
QUAN REQ | RND NO | DWG SIZE | CODE IDENT | PART NO OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | SPECIFICATIONS | REF DES
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 63 RMS
MATERIAL
DRAWN BY: M J C DATE 11 29 76
CHECKED BY: L A CARROLL 12 15 76
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA. U.S.A.
R1300 POWER SUPPLY
PC ASSEMBLY
SIZE D CODE IDENT DWG NO RD107330
SCALE 1/1 CONTRACT NO. SHEET 1 of 1
DASH NO NEXT ASSY USED ON APPLICATION

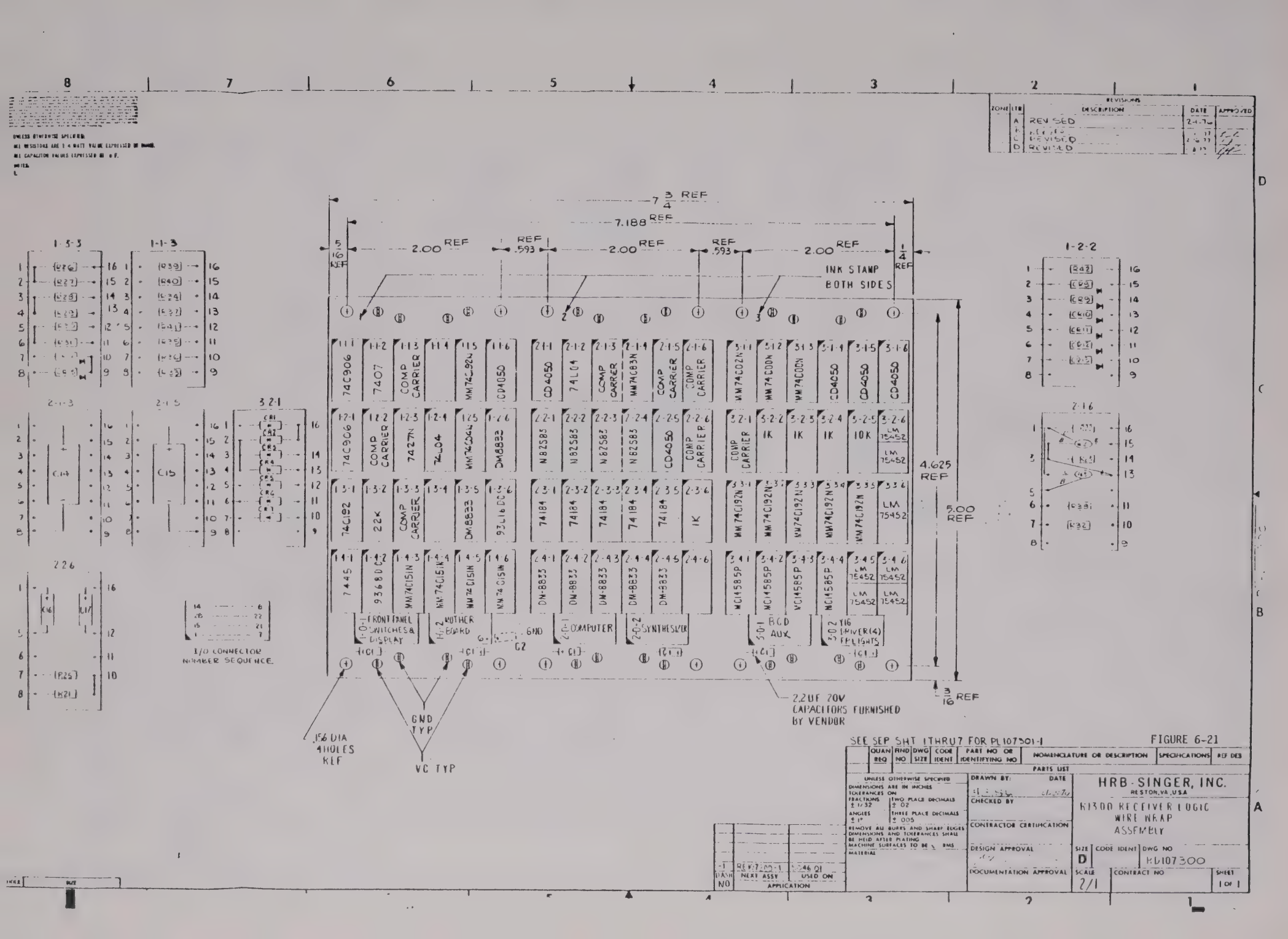
FIGURE 6-17



REVISIONS
ZONE
LTR
DESCRIPTION
DATE
APPROVED
A
REVISED
MM74C195N
CD4030A
SN74C08N
CD4029AE
CD4029CE
MM74C02
MM74C00N
MM74C02N
MM74C00
60 KHZ CLOCK
UP
DN
6μs
LM741CH
R17 220K
R18 22
R19 22
C9 .01
C10 .01
C11 .0047 (MYLAR)
R15 470K
C12 220PF
C13 220PF
C18 .0022
R1 20K
R2 39K
C4 100PF
R3 12K
R4 47K
R5 12K
R6 47K
R7 27K
R8 47K
C5 .01UF
C6 1UF
C7 1UF
R9 220 K
R10 4.7K
R11 1K
R27 22K
XR2206
+5VDC
+15VDC
-15VDC
GND
UPP
DNP
EVCO
+12V
-12V
ω
QUAN REQ
FIND NO
DWG SIZE
CODE IDENT
PART NO OR IDENTIFYING NO
NOMENCLATURE OR DESCRIPTION
SPECIFICATIONS
REF DES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ✓ RMS
MATERIAL
DRAWN BY:
DATE
11-3-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA, USA
RCVR
MANUAL TUNING
SCHEMATIC
SIZE
D
CODE IDENT
DWG NO
RD107322
SCALE
CONTRACT NO.
SHEET
1 OF 1
NEXT ASSY
USED ON
APPLICATION

FIGURE 6-18


REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
A REVISED 2-15-77
B REVISED 5-6-77
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN μF
NOTES
1 REMOVE GND & Vcc FROM THE FOLLOWING:
3-03, 3-05, 2-05
Vcc ONLY: 3-01, 3-02
3-03, 3-05
.187 REF
5.00 REF
4.000 REF
2.50 REF
2.000 REF
.250 REF
Vcc TYP
GND TYP
CD4029CE
CD4029AE
SN74C08N
MM74C00N
CD4030A
MM74C195N
XR2206
LM 741CH
MM74C00
MM74C02
MM74C02
COMP CARRIER
COMP CARRIER
COMP CARRIER
COMP CARRIER
20-0
10-0
3-05
R3 R4 R5 R6 R7 R8 R9 R10
3-03
R1 R2 C4 C7 C6
2.2UF 20V
2 CAPACITORS FURNISHED BY VENDOR
VCC START PIN TYP
.01UF 50V
24 CAPACITORS FURNISHED BY VENDOR
3-02
R18 C9 R19 C10 C12 C13
3-01
R16 C11 R11 R17 C16 R27 C5
SEE SHT 1 THRU 5 FOR PL
FIGURE 6-19
QUAN REQ | FIND NO | DWG SIZE | CODE IDENT | PART NO OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | SPECIFICATIONS | REFERENCES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± .031
TWO PLACE DECIMALS ± .02
ANGLES ±°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE \ RMS
MATERIAL
DRAWN BY D. CARROLL DATE 11-29-76
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA. USA
RCVR MANUAL TUNING WIRE-WRAP ASSY
SIZE C
CODE IDENT
DWG NO RC107320
SCALE 2/1
CONTRACT NO
SHEET 1 OF 1
-1 DASH NO.
RE.07200-1 NEXT ASSY
5046 0102 USED ON
APPLICATION
C_RC107320_B


REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
A REVISED
B REVISED
C REVISED
D REVISED
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN M.F.
NOTES:
7 3/4 REF
7.188 REF
2.00 REF
.593 REF
5/16 REF
1/4 REF
INK STAMP BOTH SIDES
4.625 REF
5.00 REF
3/16 REF
1-5-3
1-1-3
1-2-2
2-1-3
2-1-5
3-2-1
2-1-6
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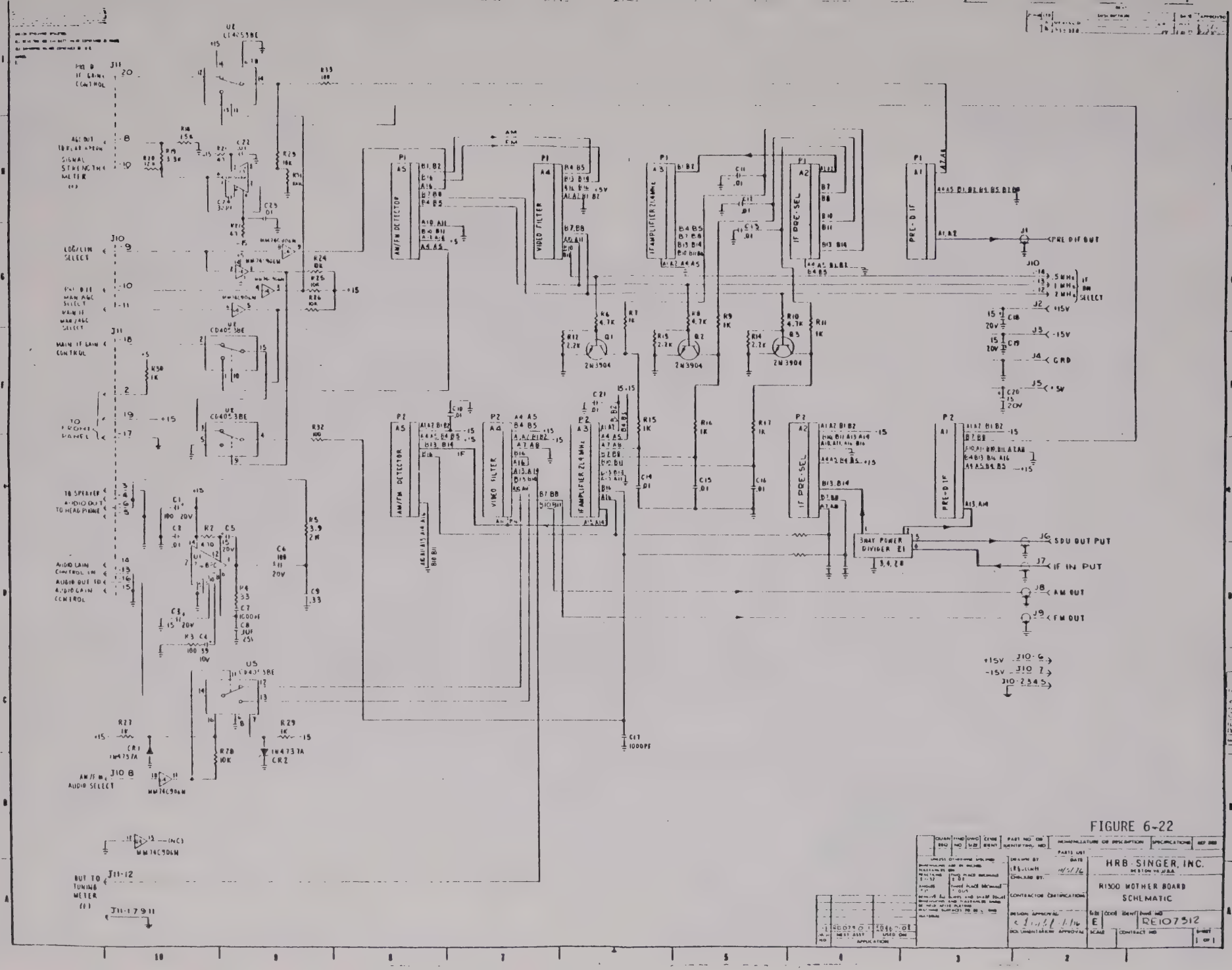
3-4-1
3-4-2
3-4-3
3-4-4
3-4-5
3-4-6
74C906
7407
COMP CARRIER
MM74C912N
CD4050
74L04
MM74C83N
MM74C02N
MM74C00N
LM 75452
74C192
22K
DM8833
93L16 DC
74184
1K
MC14585P
10K
1-0-1 FRONT PANEL SWITCHES & DISPLAY
1-0-2 MOTHER BOARD
GND
C2
2-0-1 COMPUTER
2-0-2 SYNTHESIZER
3-0-1 BCD AUX
3-0-2 Y16 DRIVER(4) FP LIGHTS
.156 DIA 4 HOLES REF
GND TYP
VC TYP
2.2UF 20V CAPACITORS FURNISHED BY VENDOR
I/O CONNECTOR NUMBER SEQUENCE
SEE SEP SHT 1 THRU 7 FOR PL107301-1
FIGURE 6-21
PARTS LIST
QUAN REQ | FIND NO | DWG SIZE | CODE IDENT | PART NO OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | SPECIFICATIONS | REF DES
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 125 RMS
MATERIAL
DRAWN BY: DATE
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA. U.S.A.
R1300 RECEIVER LOGIC WIRE WRAP ASSEMBLY
SIZE D | CODE IDENT | DWG NO RD107300
SCALE 2/1 | CONTRACT NO | SHEET 1 OF 1
-1 DASH NO | REV 7.00-1 NEXT ASSY | 546 01 USED ON APPLICATION


HRB-SINGER, INC.
R1300 MOTHER BOARD
SCHEMATIC
RE107312
FIGURE 6-22

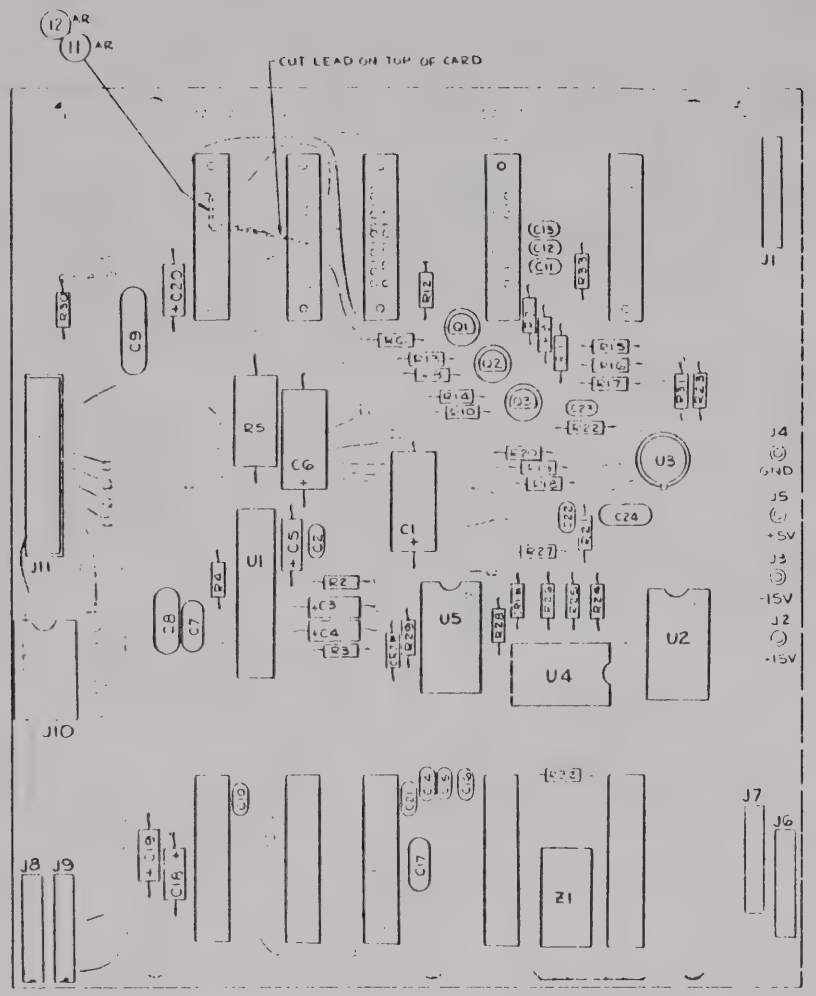


FIGURE 6-23

SEE SEP SHT 1 THRU 7 FOR PL107311

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS
MATERIAL

DRAWN BY | DATE
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA., U.S.A.

R1300 MOTHER BOARD ASSY

SIZE D | CODE IDENT | DWG NO RD107310
SCALE 2/1 | CONTRACT NO | SHEET OF

DASH NO	NEXT ASSY	USED ON
-1	RE107300-1	07601

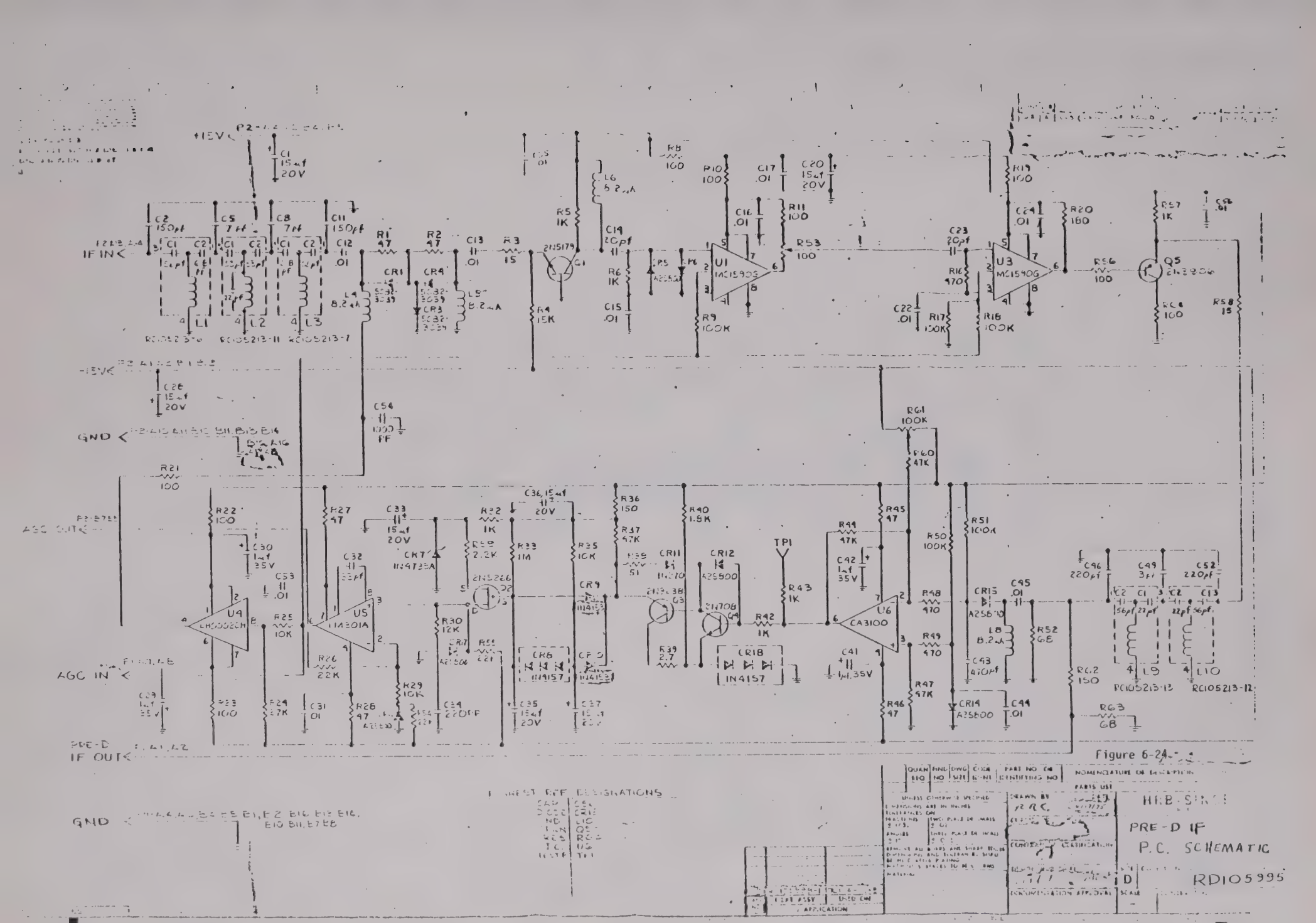
APPLICATION

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REDRAWN		
	B	REVISED		
	C	CHANGED R33 TO R23		

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN µF

NOTES:
1 SCHEMATIC RE107312 REF


+15V
IF IN
-15V
GND
AGC OUT
AGC IN
PRE-D IF OUT
GND
C1 15uf 20V
C2 150pf
C5 7pf
C8 7pf
C11 150pf
C12 .01
L1
L2
L3
R1 47
R2 47
C13 .01
R3 15
CR1
CR3
CR4
L4 8.2uH
L5 8.2uH
C25 .01
R5 1K
L6 8.2uH
R8 100
2N5179 Q1
R4 15K
C19 20pf
R6 1K
C15 .01
CR5
R10 100
C17 .01
C16 .01
R11 100
R53 100
U1 MC1590G
R9 100K
C20 15uf 20V
C23 20pf
R16 470
C22 .01
R17 150K
R18 100K
R19 100
C24 .01
R20 180
U3 MC1590G
R56 100
Q5 2N3906
R57 1K
C58 .01
R58 15
RC6 100
C26 15uf 20V
C54 1000 PF
R61 100K
R60 47K
R21 100
R22 100
C30 1uf 35V
C53 .01
U4 LM5002H
R23 100
R25 10K
R24 27K
C31 .01
C32 33pf
U5 LM301A
R27 47
R26 22K
R28 47
K29 10K
C33 15uf 20V
CR7 IN4735A
R32 1K
R59 2.2K
R30 12K
CR17 A25500
R58 221
2N5266 Q2
R33 11K
C34 220PF
C36 15uf 20V
R35 10K
CR6 IN4157
CR9 IN4157
C35 15uf 20V
C37 15uf 20V
R36 150
R37 47K
R38 51
R40 1.5K
CR11 IN4370
CR12 A25500
2N3638 Q3
R39 2.7
2N3708 Q4
TP1
R43 1K
R42 1K
CR18 IN4157
R44 47K
C42 1uf 35V
U6 CA3100
C41 1uf 35V
R45 47
R46 47
R47 47K
R50 100K
R51 100K
R48 470
R49 470
CR13 A25500
C43 470pf
L8 8.2uH
C45 .01
R52 68
CR14 A25500
C44 .01
RC2 150
R63 68
C46 220pf
C49 3pf
C52 220pf
L9
L10
RC105213-13
RC105213-12
C29 1uf 35V
R29 27K
C31 .01
C39 220PF
C40 .01
R31 100
C27 .01
C28 15uf 20V
RC105213-6
RC105213-11
RC105213-7
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CR1000
HRB-SINGER
PRE-D IF
P.C. SCHEMATIC
RD105995

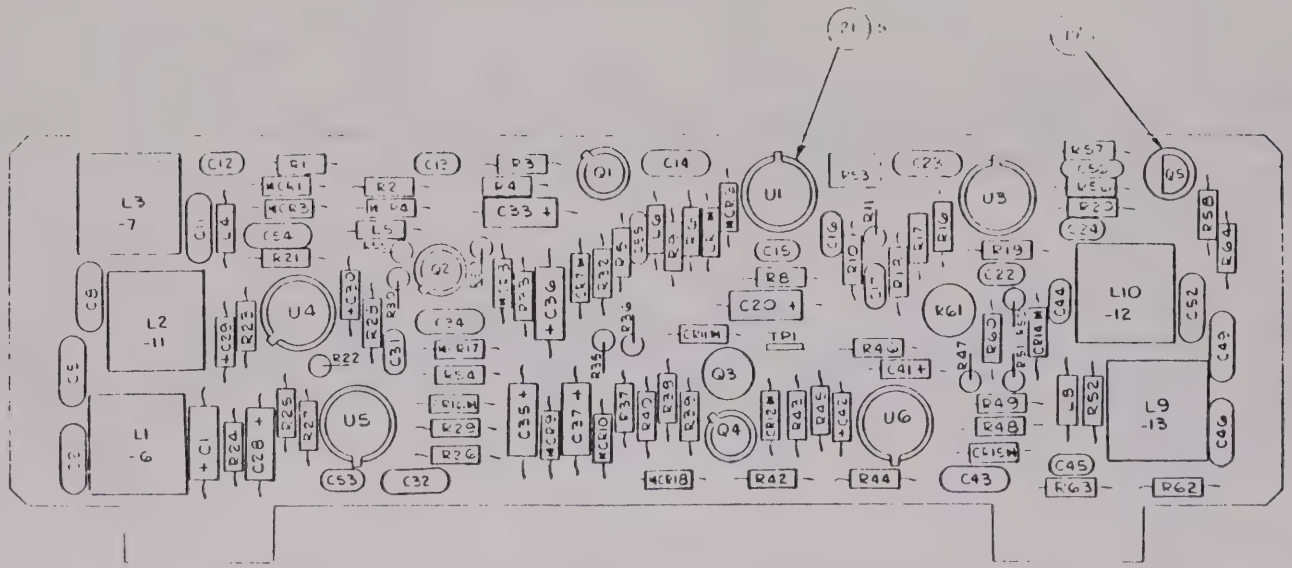
Figure 6-24

REVISIONS

ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	CR9 & CR10 WERE FD100	10-7-76	

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC
RD105995 1 REF



SEE SEP SHT 1 THRU 8 FOR PL

FIGURE 6-25

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS
MATERIAL

DRAWN BY: DATE 6-17-75
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 7-16-76
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

PRE-D IF
P.C. ASSY

SIZE	CODE IDENT	DWG NO
C		RC105998

SCALE	CONTRACT NO	SHEET
2/1		1 OF

DASH No.	NEXT ASSY	USED ON
-1	RC105922-3	DL104922-3

APPLICATION

C 998

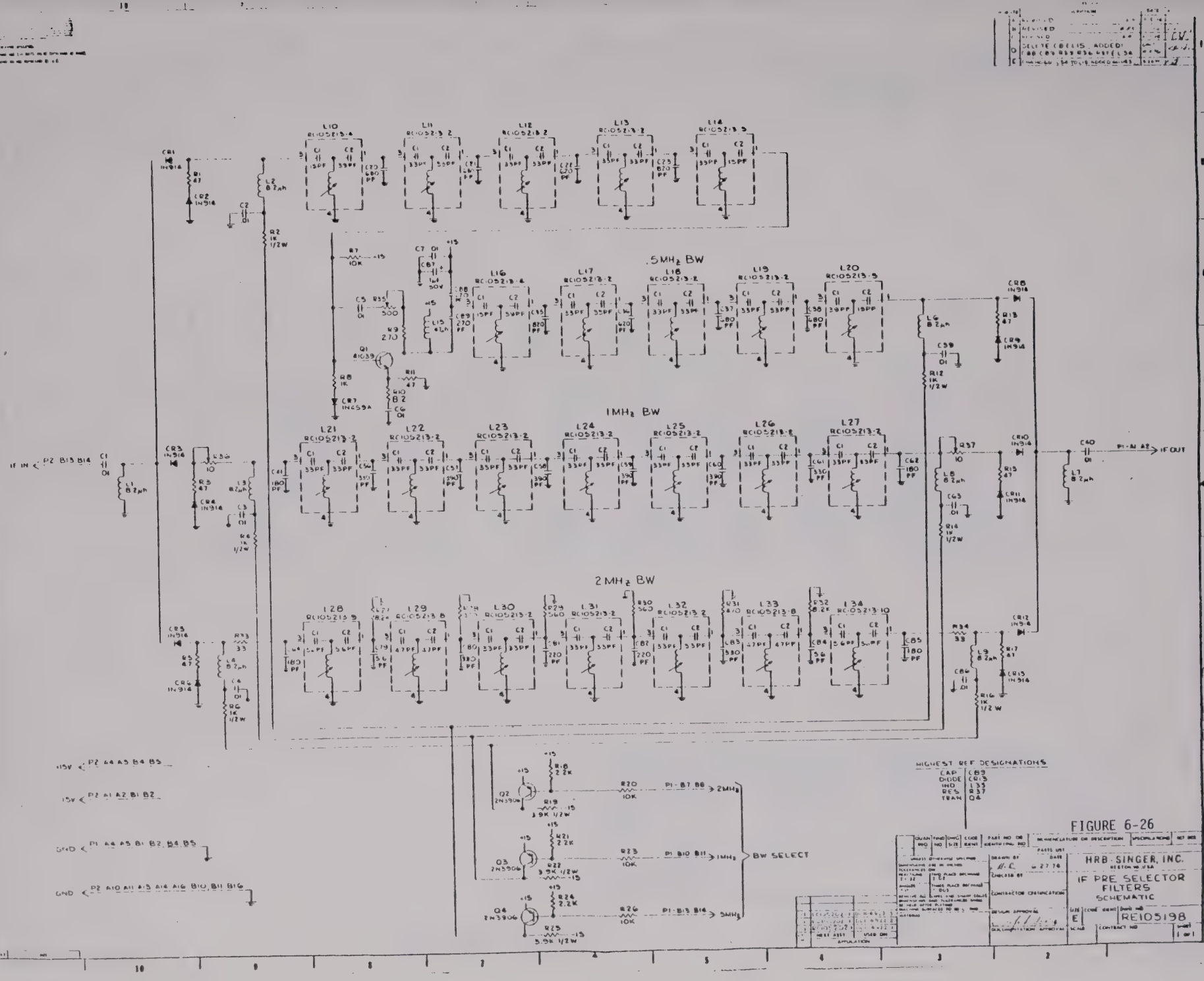
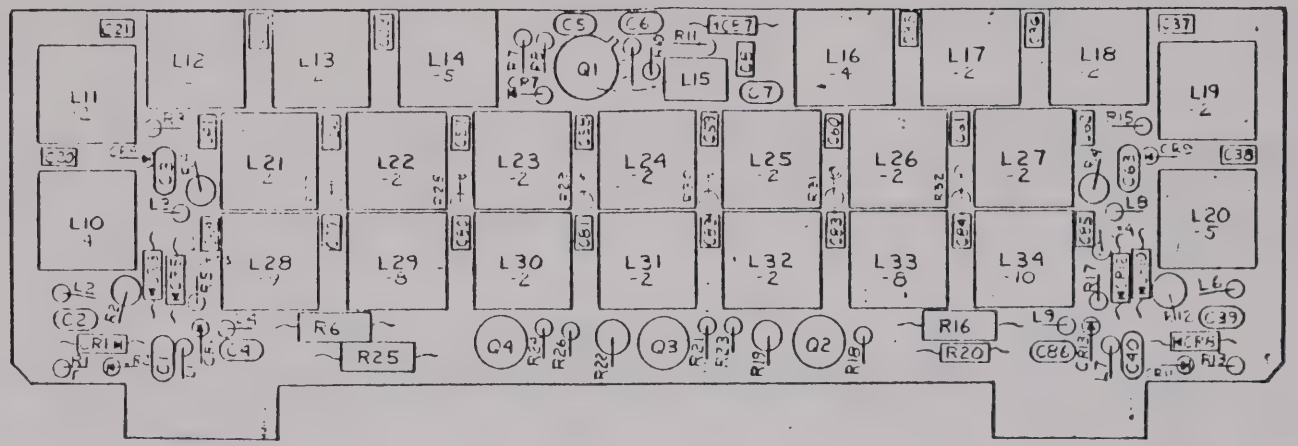

.5MH₂ BW
1MH₂ BW
2MH₂ BW
IF IN
IF OUT
+15V
-15V
GND
BW SELECT
HIGHEST REF DESIGNATIONS
CAP C89
DIODE CR13
IND L33
RES R37
TRAN Q4
HRB-SINGER, INC.
IF PRE SELECTOR FILTERS SCHEMATIC
RE105198

FIGURE 6-26

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED LA	4-5-74	
	C	REVISED RRC.		
	D	REVISED L.A.	11-7-75	OK

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC RE105198-1 REF



RC105202

FIG. 6-27

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
PARTS LIST							

E	E104922-1	4796
DWG SIZE	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING.
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: RRC. DATE 6-26-74
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 7/1/74
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

IF PRE SELECTOR FILTERS
P C ASSY

SIZE	CODE IDENT	DWG NO.
C		RC105202

SCALE	CONTRACT NO.	SHEET
		1 of 1

HOLE	SIZE

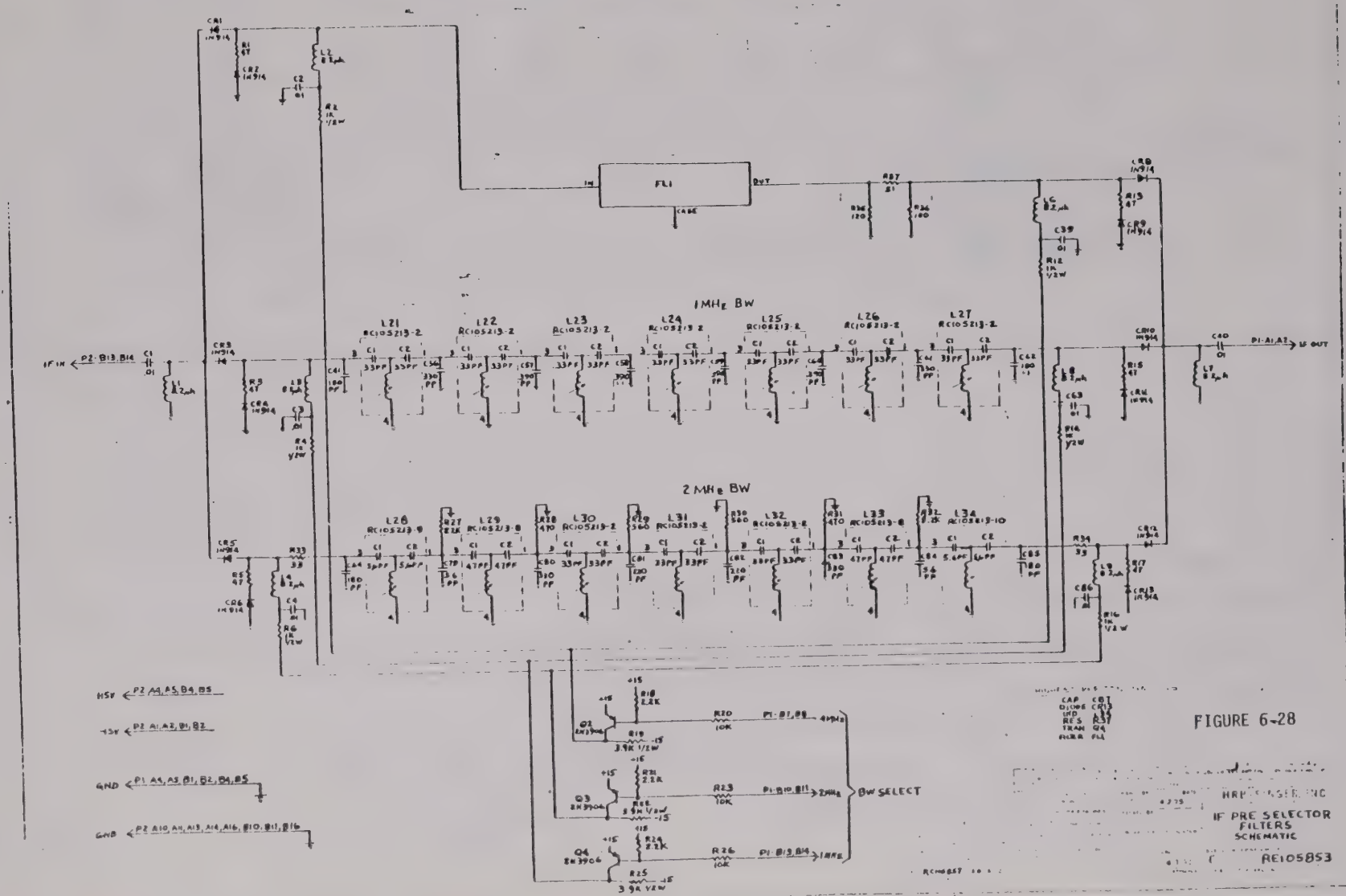


FIGURE 6-28

IF PRE SELECTOR FILTERS SCHEMATIC

RE105853

REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED
A	ADDED R35, R36 & R37	5/30/75	
B	ITEMS 50 & 60 WERE P/O R07(6.8K)2.7S	12-29-76	
C	ADDED: CBB .01	1-21-77	

UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/4 WATT: VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC RE105853-1 REF.
2. ADDED R35, R36 & R37 (NEARSIDE) SEE SCHEMATIC FOR REF.

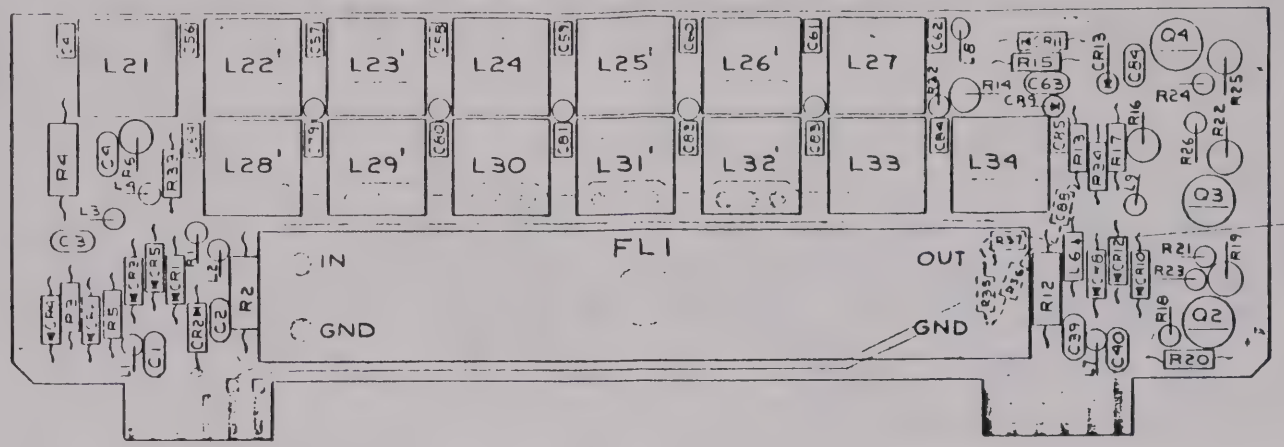


FIGURE 6-29

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

DWG SIZE	NEXT ASSY	USED ON
	APPLICATION	4879

HOLE | SIZE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ∨ RMS
MATERIAL

DRAWN BY: RLG. DATE 4-7-75
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: K Clifford 4-7-75
DOCUMENTATION APPROVAL:

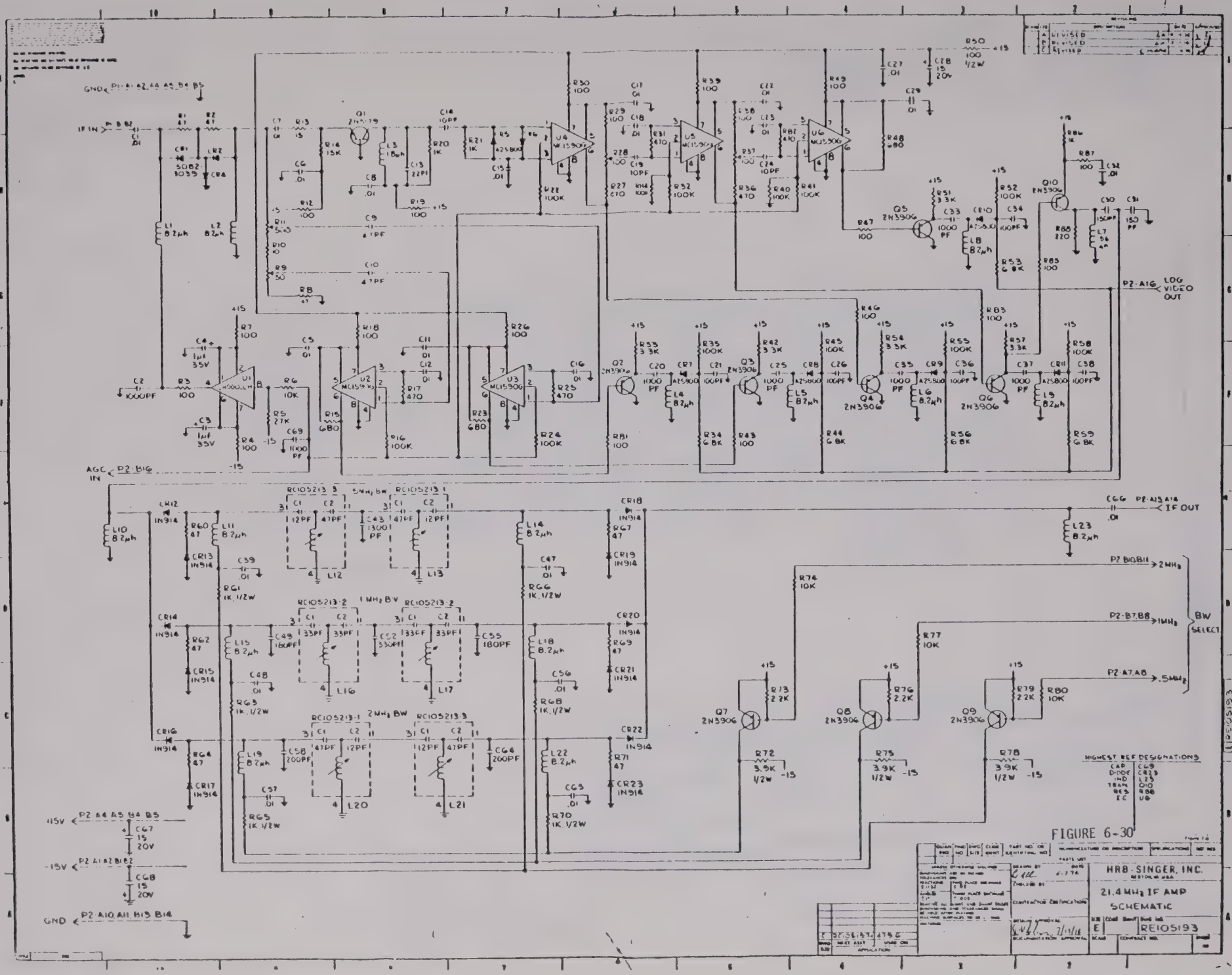
HRB-SINGER, INC.
RESTON, VA, U.S.A.

IF PRE SELECTOR FILTERS (PC ASSY)

SIZE	CODE IDENT	DWG NO.
C		RC105857

SCALE	CONTRACT NO.	SHEET
2/1		1 of 1

RC105857



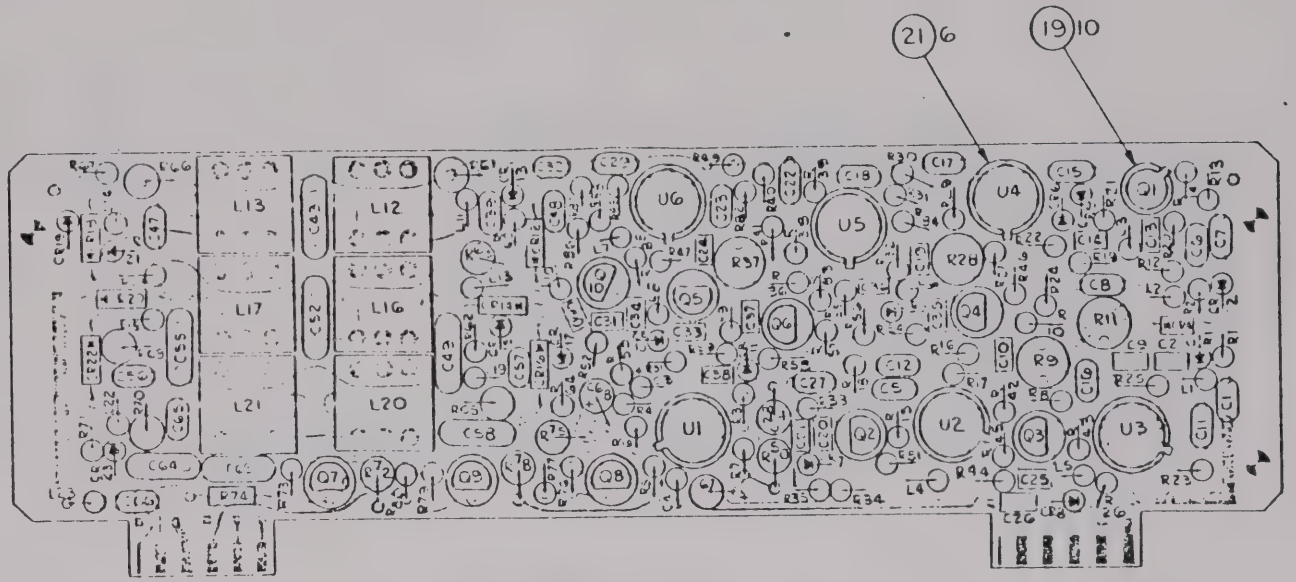
IF IN
GND
AGC IN
P2-B16
LOG VIDEO OUT
P2-A16
IF OUT
P2-A13,A14
BW SELECT
P2-B10,B11
2MHz
P2-B7,B8
1MHz
P2-A7,A8
.5MHz
+15V
-15V
P2-A4,A5,B4,B5
P2-A1,A2,B1,B2
P2-A10,A11,B13,B14
HIGHEST REF DESIGNATIONS
CAP C69
DIODE CR23
IND L23
TRAN Q10
RES R88
IC U6
HRB-SINGER, INC.
21.4 MHz IF AMP
SCHEMATIC
RE105193

FIGURE 6-30

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REDRAWN C.M.	9-19-74	
	C	REVISED C.M.	10-17-74	
	D	REVISED RELEASE	11-1-74	
	E	REVISED C MORAN	11-19-74	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT; VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC RE105193 REF



SEE SEP SHT 1 THRU 8 FOR PL

FIG. 6-31A

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
				PARTS LIST			

E	RE104922-1	4796
DWG SIZE	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES.
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING.
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: DATE 9-19-74
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 9-19-74
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

21.4 MHz IF AMPLIFIER PC ASSY

SIZE	CODE IDENT	DWG NO.
C		RC105197
SCALE 2/1	CONTRACT NO.	SHEET 1 OF 1

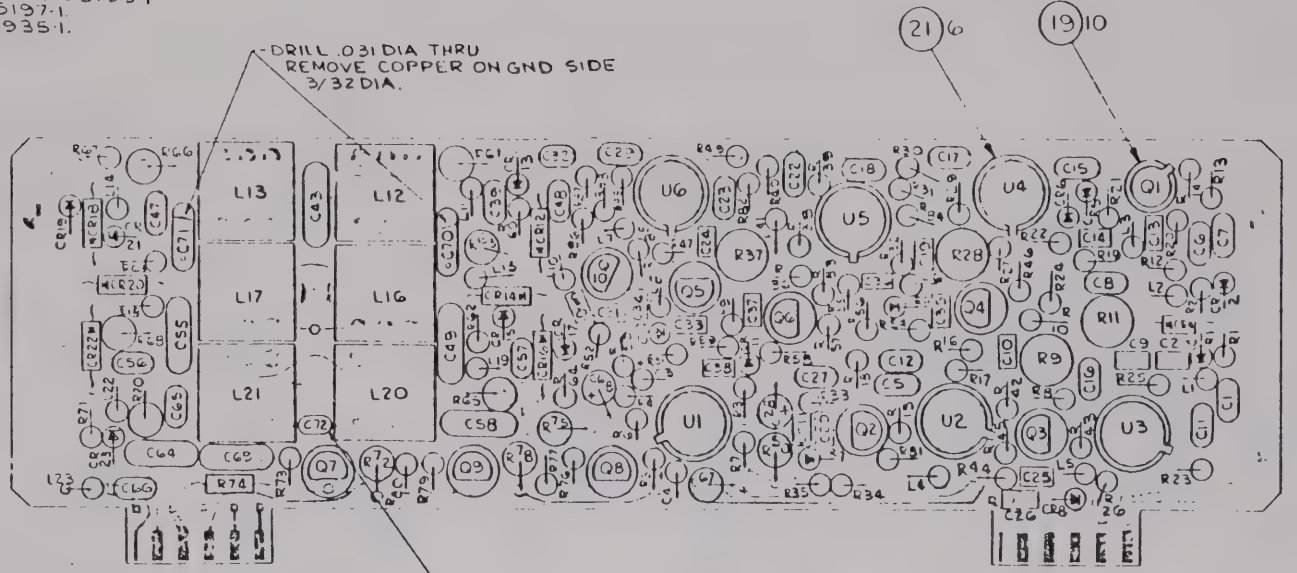
RC105197

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES.
1. SCHEMATIC
RE105934-1 REF

2 REMOVE SCHEMATIC NO RE105193-1
REMOVE ASSY NO. RC105197-1.
STAMP ASSY NO. RC105935-1.



SEE SEP SHT 1 THRU 8 FOR PL

FIGURUE 6-31B

	QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

E	RE105927-1	4874
DWG SIZE	NEXT ASSY	USED ON
	APPLICATION	

HOLE | SIZE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: MK DATE 5-13-75
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: W. Short 6-16-75
DOCUMENTATION APPROVAL:

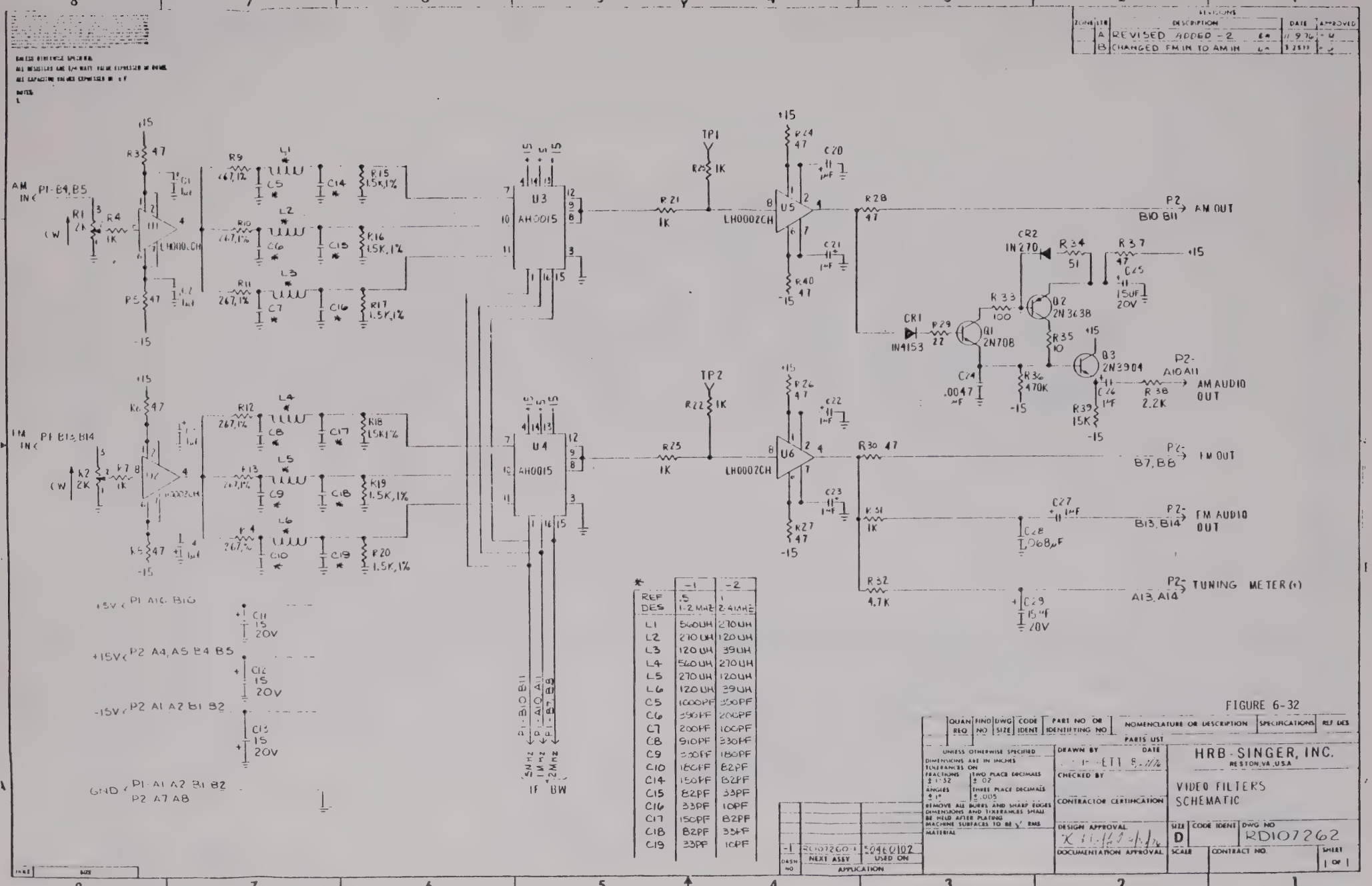
HRB-SINGER, INC.
RESTON, VA. U.S.A.

21.4 MHz IF AMPLIFIER
PC ASSY

SIZE	CODE IDENT	DWG NO.
C		RC105935

SCALE	CONTRACT NO.	SHEET
2/1		1 OF 1

RC105935



*	-1	-2
REF DES	.5 1-2 MHz	1 2-4 MHz
L1	560UH	270UH
L2	270UH	120UH
L3	120UH	39UH
L4	560UH	270UH
L5	270UH	120UH
L6	120UH	39UH
C5	1000PF	390PF
C6	390PF	200PF
C7	200PF	100PF
C8	910PF	330PF
C9	330PF	180PF
C10	180PF	82PF
C14	150PF	82PF
C15	82PF	33PF
C16	33PF	10PF
C17	150PF	82PF
C18	82PF	33PF
C19	33PF	10PF

FIGURE 6-32

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ✓ RMS
MATERIAL

DRAWN BY ETT DATE 8-11-76
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA, USA

VIDEO FILTERS
SCHEMATIC

SIZE D | CODE IDENT | DWG NO RD107262
SCALE | CONTRACT NO. | SHEET 1 OF 1

DASH NO	NEXT ASSY	USED ON
-1	RD107260-1	50460102

APPLICATION

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED ADDED -2 LA	11-9-76	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT: VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC
RD107262 REF

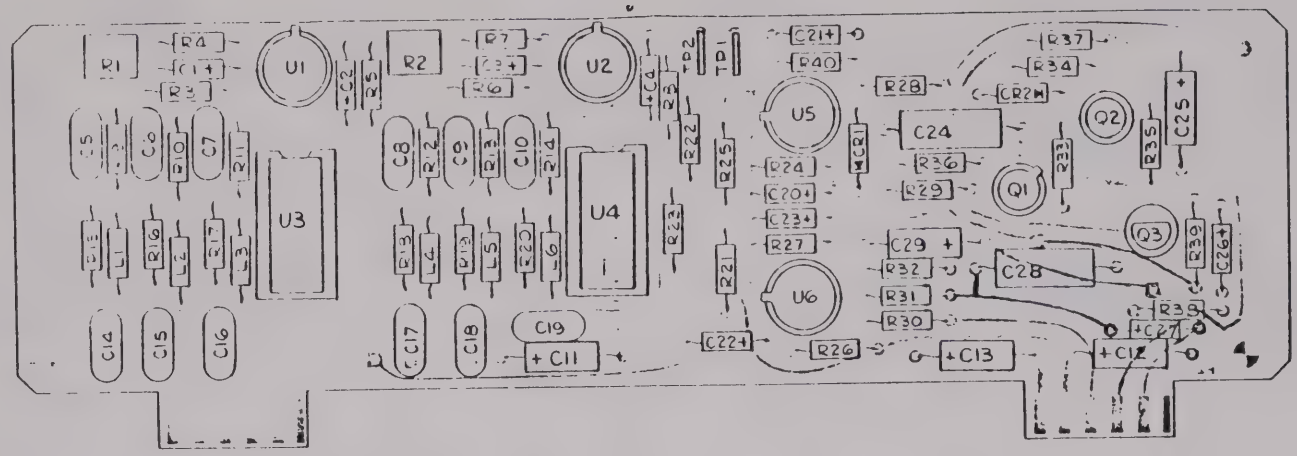


FIGURE 6-33

SEE SEP SHT 1 THRU FOR PL PL107261-1

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
					PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES.
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: DATE 9-12-76
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: K L Clifford 11/10/76
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

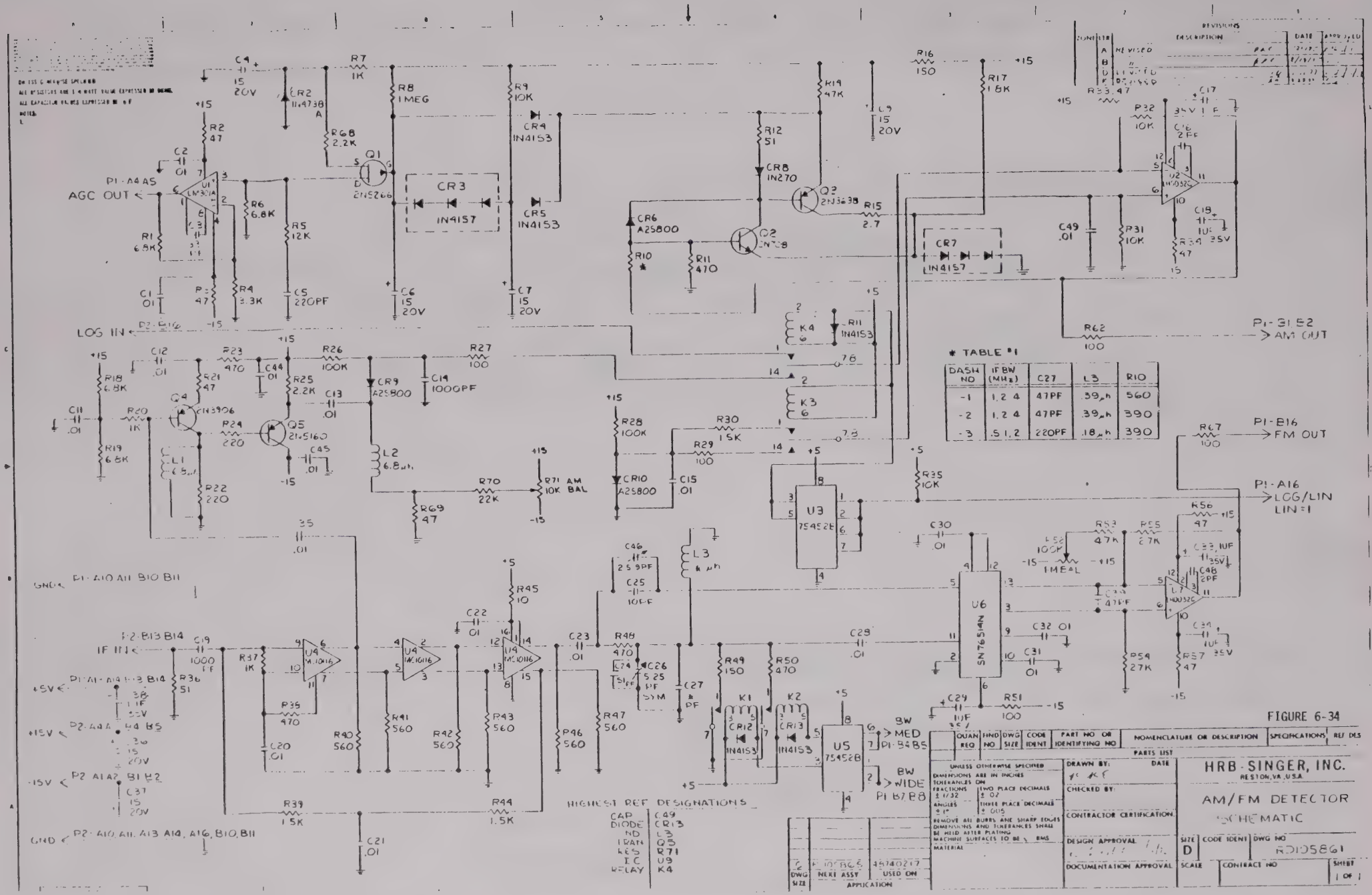
VIDEO FILTERS ASSY

SIZE	CODE IDENT	DWG NO.
C		RC107260

SCALE	CONTRACT NO.	SHEET
2/1		1 OF 1

DASH NO.	NEXT ASSY	USED ON
-1	RE107260-1	50460102
	APPLICATION	

HOLE	SIZE



* TABLE #1

DASH NO	IF BW (MHz)	C27	L3	R10
-1	1, 2, 4	47PF	.39 µh	560
-2	1, 2, 4	47PF	.39 µh	390
-3	.5, 1, 2	220PF	.18 µh	390

HIGHEST REF DESIGNATIONS

CAP	C49
DIODE	CR13
IND	L3
TRAN	Q5
RES	R71
IC	U9
RELAY	K4

FIGURE 6-34

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 — TWO PLACE DECIMALS ± .02
ANGLES ± 1° — THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ✓ RMS
MATERIAL

DRAWN BY: DATE
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
STATE COLLEGE, PENNSYLVANIA

AM/FM DETECTOR
SCHEMATIC

SIZE D | CODE IDENT | DWG NO RD05861
SCALE | CONTRACT NO | SHEET 1 OF 1

DWG SIZE	NEXT ASSY	USED ON
C	105865	45740217

APPLICATION

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED	5/20/75	
	B	REMOVED C47	8/19/75	
	C	ADDED -2-3	10-9-76	
	D	REVISED	2-11-77	
	E	REVISED	2-22-77	
	F	UPDATED PARTS LIST	3-21-77	

UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1 SCHEMATIC RD105861-1 REF.

STAMP APPROPRIATE DASH NO WITH BLK EPOXY INK

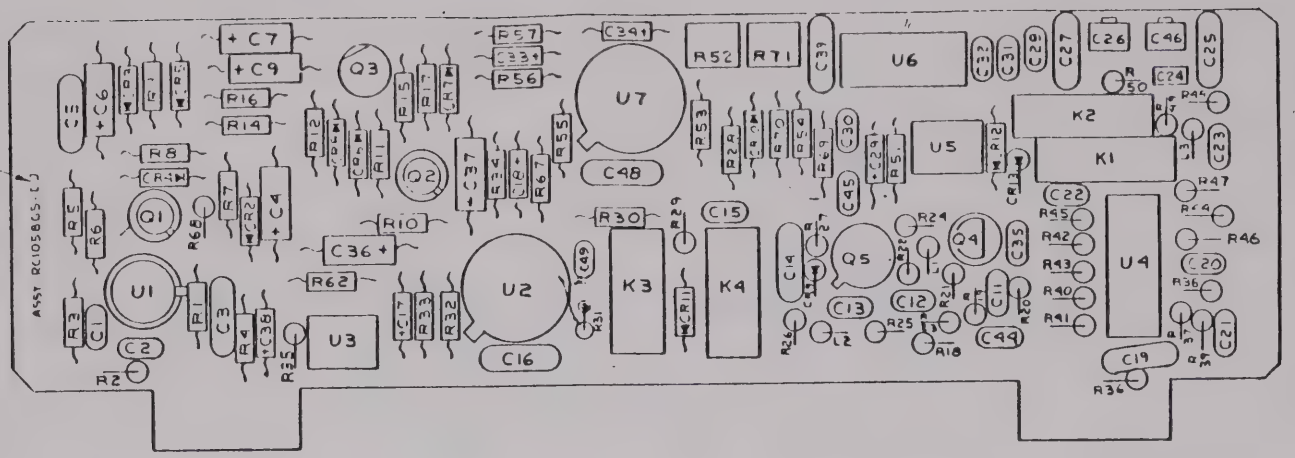


FIGURE 6-35

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES
				PARTS LIST			
-2				PL107209-1	5046		
					487902		
DWG SIZE		NEXT ASSY		APPLICATION	USED ON		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 | TWO PLACE DECIMALS ± .02
ANGLES ± 1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE \ RMS
MATERIAL

DRAWN BY RKS DATE 9-10-75
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL
DOCUMENTATION APPROVAL

HRB-SINGER, INC.
RESTON, VA. USA

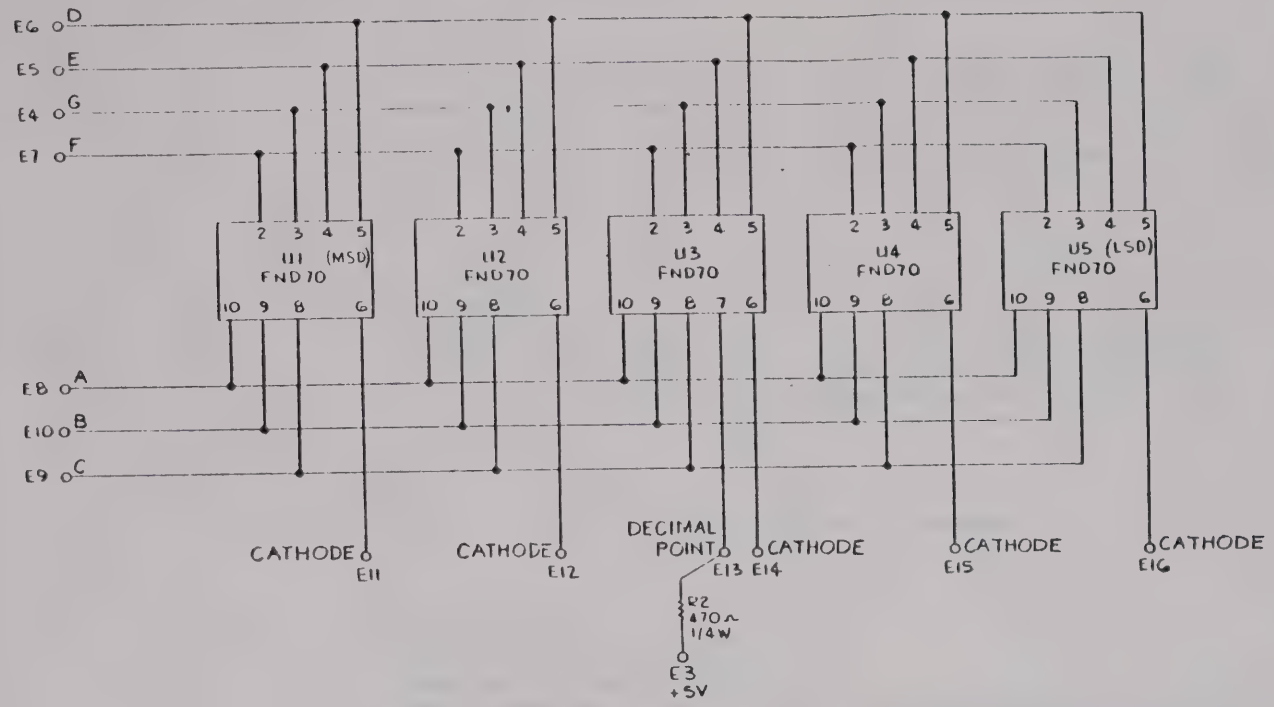
AM/FM DETECTOR
(PC ASSY)

SIZE C | CODE IDENT | DWG NO RC105865
SCALE 2/1 | CONTRACT NO | SHEET 1 OF 1

RC105865

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	CHANGED R1 WAS 220Ω	5 31 74	LU
	B	CHANGED CR1, CR2 6/20/74 CMA	7/15/74	
	C	CHANGED: R1 WAS 39Ω, ADDED: R2 470Ω ¼W	8/15-74	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT. VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.
NOTES:
1.



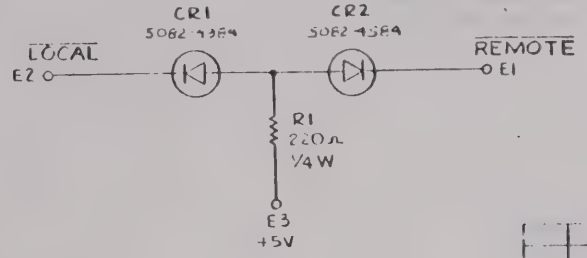


FIGURE 6-36

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: D CARROLL DATE 4-18-74
CHECKED BY:
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: DATE 5-30-74
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA. U.S.A.

SCHEMATIC
5 DIGIT READOUT

SIZE	CODE IDENT	DWG NO.
C		RC105057

SCALE	CONTRACT NO.	SHEET
~		1 OF 1

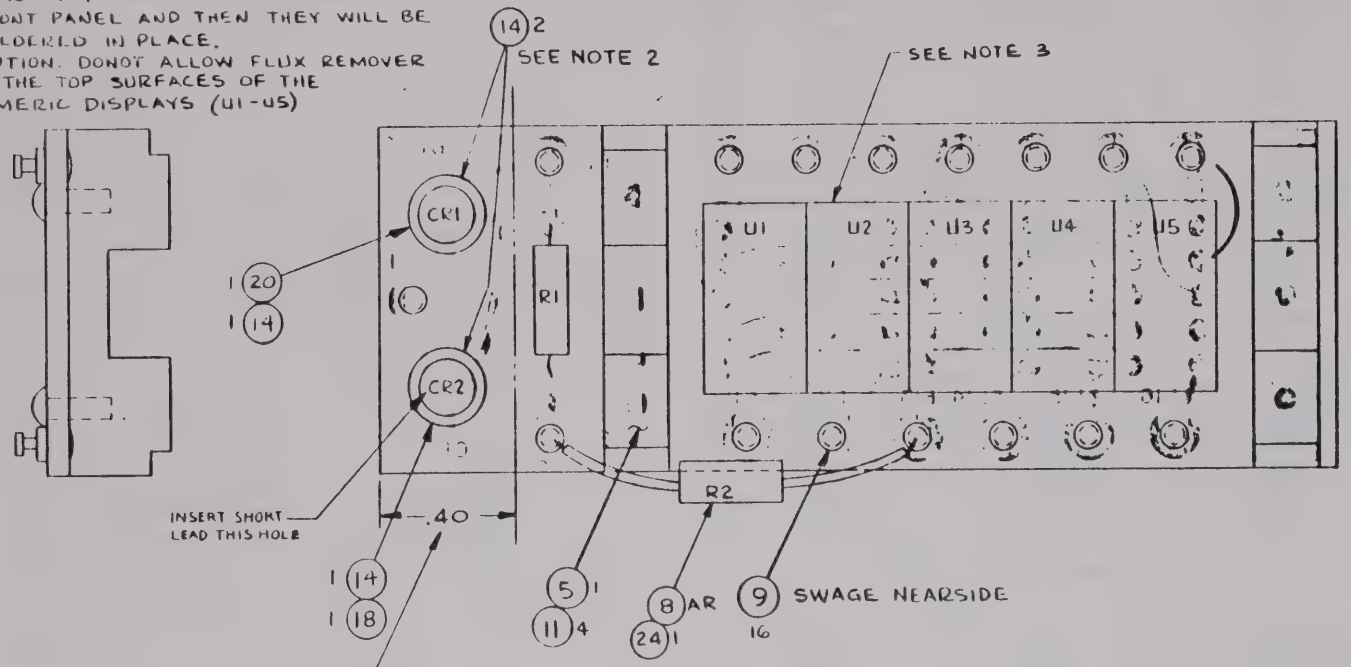
DWG SIZE	NEXT ASSY	USED ON
C	RC105061-1	4796
APPLICATION		

FINISH	SIZE

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REVISED GMA 6/19/74		
	B	ADDED: R2, 470Ω	8-15-74	
	C	REVISED	9-13-74	
	D	REVISED	9-23-74	
	E	REVISED C MORAN	11-13-74	

UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS.
ALL CAPACITOR VALUES EXPRESSED IN μF.

NOTES:
1. SCHEMATIC RC105057-1 REF
2. DONOT SOLDER LIGHT EMITTING DIODES (CR1 & CR2) IN PLACE. THEY ARE TO BE ALLIGNED WHEN THE READOUT PC CARD IS ASSEMBLED TO THE FRONT PANEL AND THEN THEY WILL BE SOLDERED IN PLACE.
3. CAUTION. DONOT ALLOW FLUX REMOVER ON THE TOP SURFACES OF THE NUMERIC DISPLAYS (U1-U5)



CUT OFF FOR -2 ASSY ONLY
(LEAVE ASSY NO. ETCHED ON BD, REMOVE ETCHED -1 FROM ASSY NO. & RUBBER STAMP -2 AT END OF ASSY NO. WITH BLACK EPOXY INK)

FIGURE 6-37

SEE SEPARATE 8½ x 11 SHEET 1 FOR P/L

QUAN REQ	FIND NO.	DWG SIZE	CODE IDENT	PART NO. OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

	NEXT ASSY	USED ON
-1	RE104922-3	DL104922-3
-1	RE104922-2	DL104922-2
-1	RE104922-1	DL104922-1

APPLICATION

HOLE	SIZE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.
TOLERANCES ON:
FRACTIONS ±1/32 | TWO PLACE DECIMALS ± .02
ANGLES ±1° | THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING.
MACHINE SURFACES TO BE √ RMS.
MATERIAL

DRAWN BY: D. CARROLL DATE 4-22-74
CHECKED BY: 9-23-74
CONTRACTOR CERTIFICATION:
DESIGN APPROVAL: 4-23-74
DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., U.S.A.

5 DIGIT READOUT
PC ASSEMBLY

SIZE	CODE IDENT	DWG NO.
C		RC105061

SCALE 4:1 | CONTRACT NO. | SHEET 1 OF 1

C RC105061

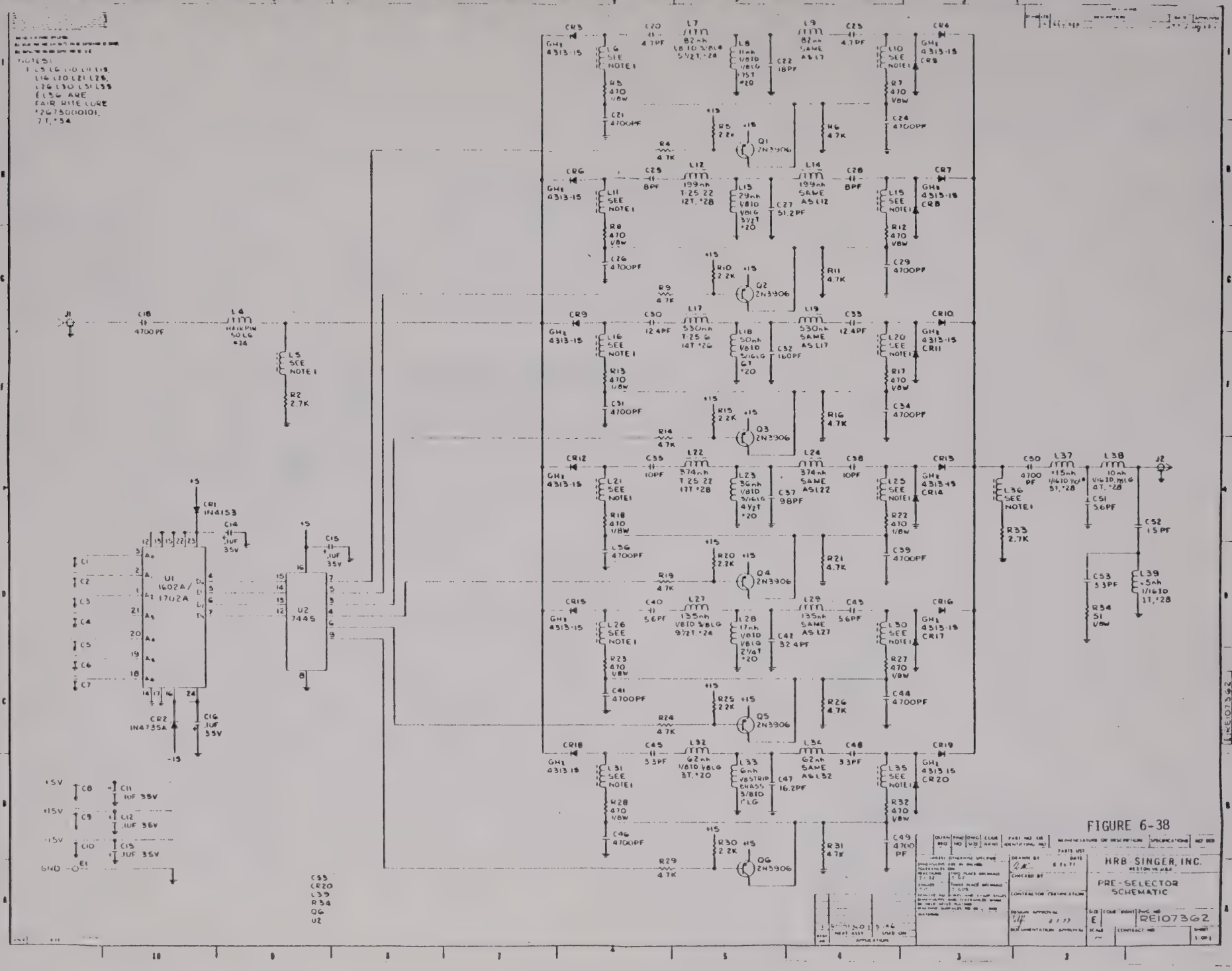
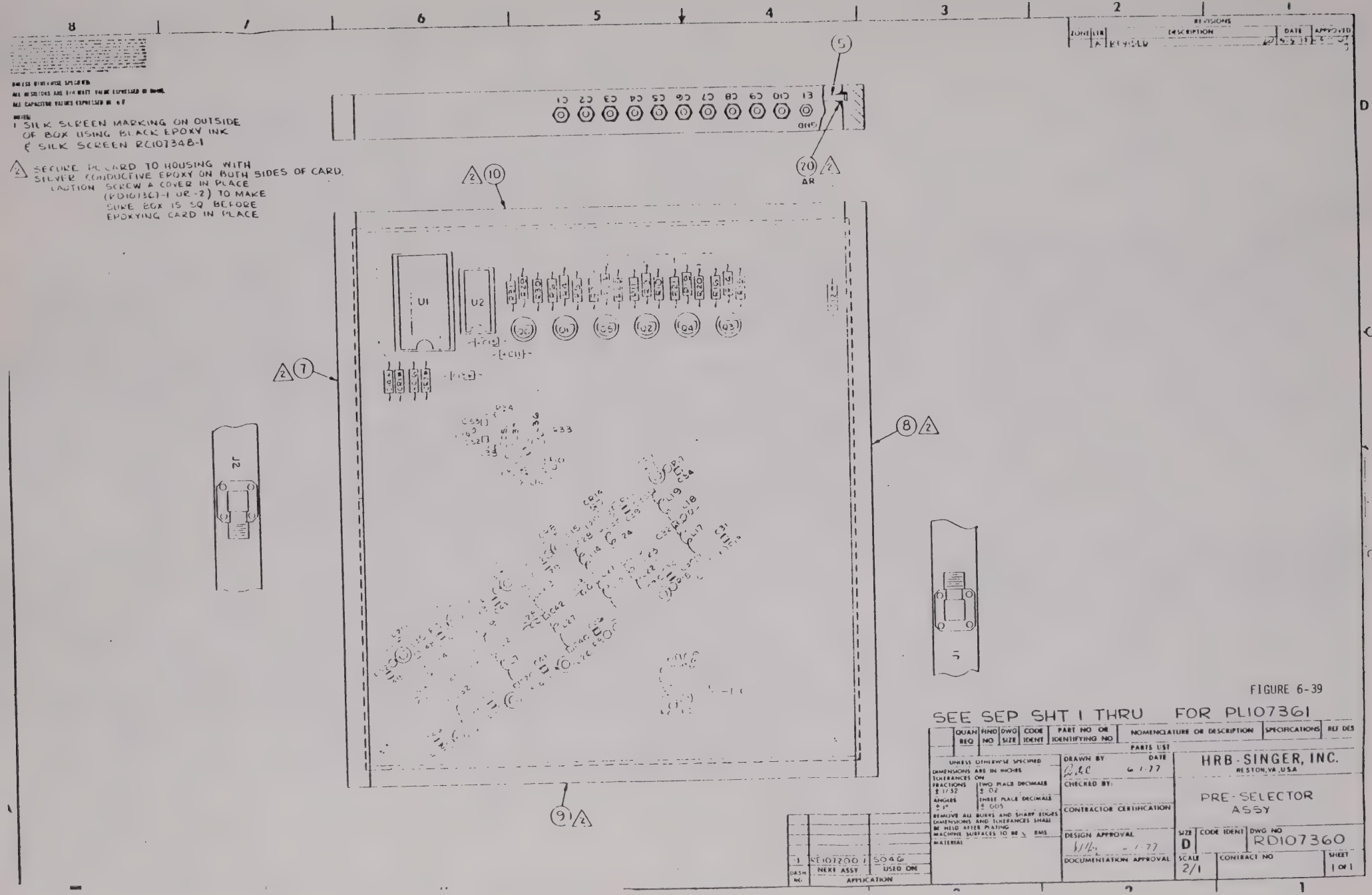

NOTES:
1. L5 L6 L10 L11 L15, L16 L20 L21 L25, L26 L30 L31 L35 & L36 ARE FAIR RITE CORE #2673000101, 7T, #34
J1
C18 4700PF
L4 HAIRPIN 50LG #24
L5 SEE NOTE 1
R2 2.7K
CR1 1N4153
C14 .1UF 35V
U1 1602A/1702A
C15 .1UF 35V
U2 7445
CR2 1N4735A
C16 .1UF 35V
+5V
+15V
-15V
GND
C8 C9 C10 C11 C12 C13 .1UF 35V
C53 CR20 L39 R34 Q6 U2
CR3 GH2 4313-15
L6 SEE NOTE 1
R3 470 1/8W
C21 4700PF
C20 4.7PF
L7 82nh 1/8 ID 3/8LG 5 1/2T, #24
L8 11nh 1/8ID 1/8LG 7ST #20
C22 18PF
L9 82nh SAME AS L7
C23 4.7PF
L10 SEE NOTE 1
CR4 GH2 4313-15 CR5
R7 470 1/8W
C24 4700PF
R5 2.2K
R6 4.7K
R4 4.7K
Q1 2N3906
CR6 GH2 4313-15
L11 SEE NOTE 1
R8 470 1/8W
C26 4700PF
C25 8PF
L12 199nh T-25 22 12T, #28
L13 29nh 1/8ID 1/8LG 3 1/2T #20
C27 51.2PF
L14 199nh SAME AS L12
C28 8PF
L15 SEE NOTE 1
CR7 GH2 4313-15 CR8
R12 470 1/8W
C29 4700PF
R10 2.2K
R11 4.7K
R9 4.7K
Q2 2N3906
CR9 GH2 4313-15
L16 SEE NOTE 1
R13 470 1/8W
C31 4700PF
C30 12.4PF
L17 530nh T-25 6 14T #26
L18 50nh 1/8ID 3/16LG 6T #20
C32 160PF
L19 530nh SAME AS L17
C33 12.4PF
L20 SEE NOTE 1
CR10 GH2 4313-15 CR11
R17 470 1/8W
C34 4700PF
R15 2.2K
R16 4.7K
R14 4.7K
Q3 2N3906
CR12 GH2 4313-15
L21 SEE NOTE 1
R18 470 1/8W
C36 4700PF
C35 10PF
L22 374nh T 25 22 17T #28
L23 36nh 1/8ID 3/16LG 4 1/2T #20
C37 98PF
L24 374nh SAME AS L22
C38 10PF
L25 SEE NOTE 1
CR13 GH2 4313-15 CR14
R22 470 1/8W
C39 4700PF
R20 2.2K
R21 4.7K
R19 4.7K
Q4 2N3906
CR15 GH2 4313-15
L26 SEE NOTE 1
R23 470 1/8W
C41 4700PF
C40 5.6PF
L27 135nh 1/8ID 3/8LG 9 1/2T, #24
L28 17nh 1/8ID 1/8LG 2 1/4T #20
C42 32.4PF
L29 135nh SAME AS L27
C43 5.6PF
L30 SEE NOTE 1
CR16 GH2 4313-15 CR17
R27 470 1/8W
C44 4700PF
R25 2.2K
R26 4.7K
R24 4.7K
Q5 2N3906
CR18 GH2 4313-15
L31 SEE NOTE 1
R28 470 1/8W
C46 4700PF
C45 3.3PF
L32 62nh 1/8ID 1/8LG 3T, #20
L33 6nh VBSTRIP BRASS 3/8ID 1"LG
C47 16.2PF
L34 62nh SAME AS L32
C48 3.3PF
L35 SEE NOTE 1
CR19 GH2 4313-15 CR20
R32 470 1/8W
C49 4700 PF
R30 2.2K
R31 4.7K
R29 4.7K
Q6 2N3906
C50 4700 PF
L36 SEE NOTE 1
R33 2.7K
L37 15nh 1/16ID 1/8LG 5T, #28
L38 10nh 1/16ID 1/8LG 4T, #28
C51 5.6PF
C52 1.5PF
C53 3.3PF
R34 51 1/8W
L39 .5nh 1/16ID 1T, #28
J2
HRB-SINGER, INC.
PRE-SELECTOR SCHEMATIC
RE107362

FIGURE 6-38



UNLESS OTHERWISE SPECIFIED
ALL RESISTORS ARE 1/4 WATT VALUE EXPRESSED IN OHMS
ALL CAPACITOR VALUES EXPRESSED IN uF
NOTES:
1 SILK SCREEN MARKING ON OUTSIDE OF BOX USING BLACK EPOXY INK & SILK SCREEN RC107348-1
2 SECURE PC CARD TO HOUSING WITH SILVER CONDUCTIVE EPOXY ON BOTH SIDES OF CARD. CAUTION SCREW A COVER IN PLACE (RD107367-1 OR -2) TO MAKE SURE BOX IS SQ BEFORE EPOXYING CARD IN PLACE
REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
A REVISED
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 E1
GND
AR
U1
U2
J2
J1
SEE SEP SHT 1 THRU FOR PL107361
QUAN REQ
FIND NO
DWG SIZE
CODE IDENT
PART NO OR IDENTIFYING NO
NOMENCLATURE OR DESCRIPTION
SPECIFICATIONS
REF DES
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32
TWO PLACE DECIMALS ± .02
ANGLES ± 1°
THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE ≤ RMS
MATERIAL
DRAWN BY
DATE 6-1-77
CHECKED BY:
CONTRACTOR CERTIFICATION
DESIGN APPROVAL
DOCUMENTATION APPROVAL
HRB-SINGER, INC.
RESTON, VA, USA
PRE-SELECTOR ASSY
SIZE D
CODE IDENT
DWG NO RD107360
SCALE 2/1
CONTRACT NO
SHEET 1 OF 1
DASH NO
NEXT ASSY
USED ON
APPLICATION
-1 RC107200 1 5046

FIGURE 6-39

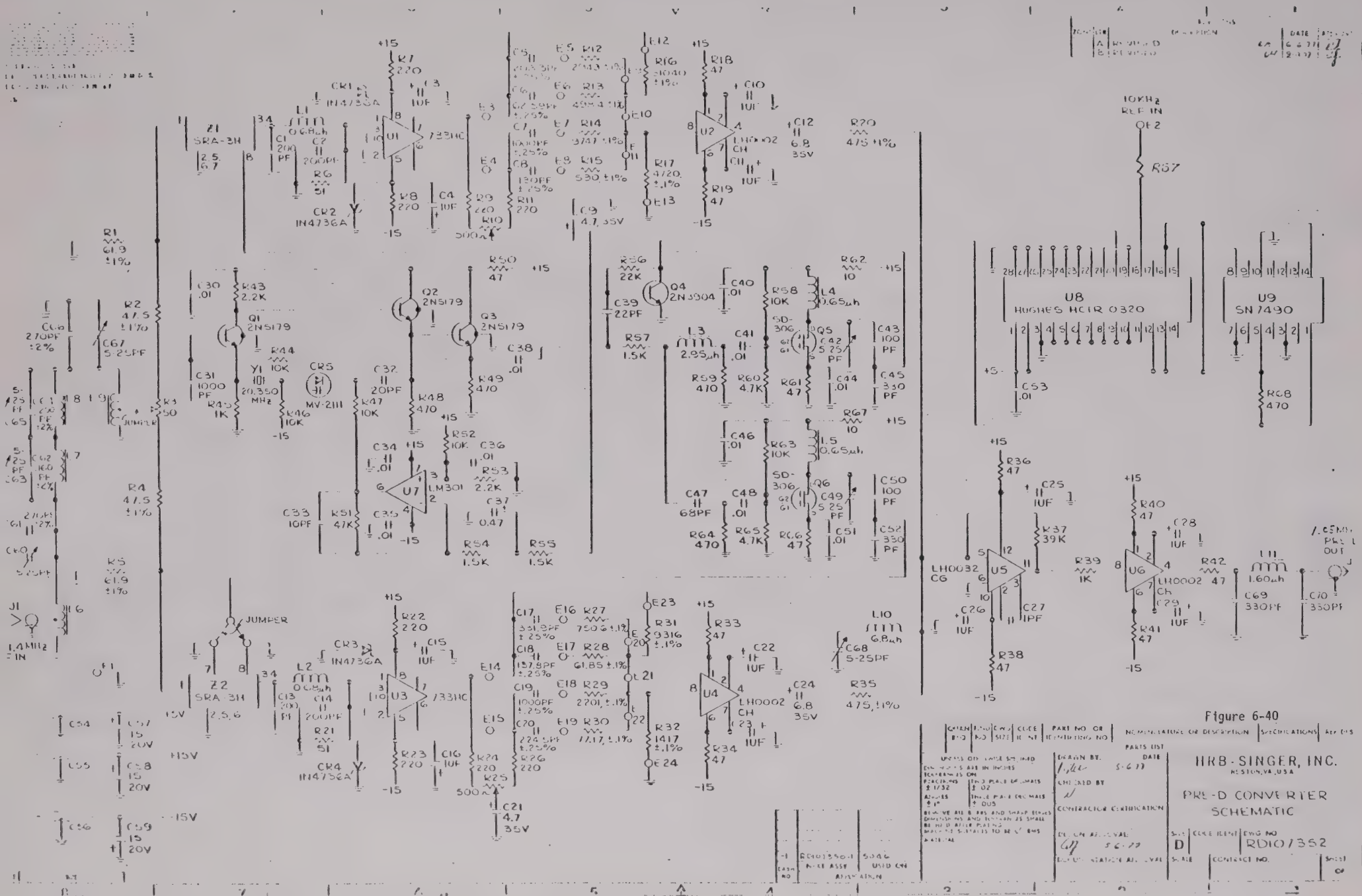


Figure 6-40

QUAN REQ	FIND NO	DWG SIZE	CODE IDENT	PART NO OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS	REF DES

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/32 THIRD PLACE DECIMALS ± .02
ANGLES ± 1° THREE PLACE DECIMALS ± .005
REMOVE ALL BURRS AND SHARP EDGES
DIMENSIONS AND TOLERANCES SHALL BE HELD AFTER PLATING
MACHINE SURFACES TO BE 125 RMS
MATERIAL

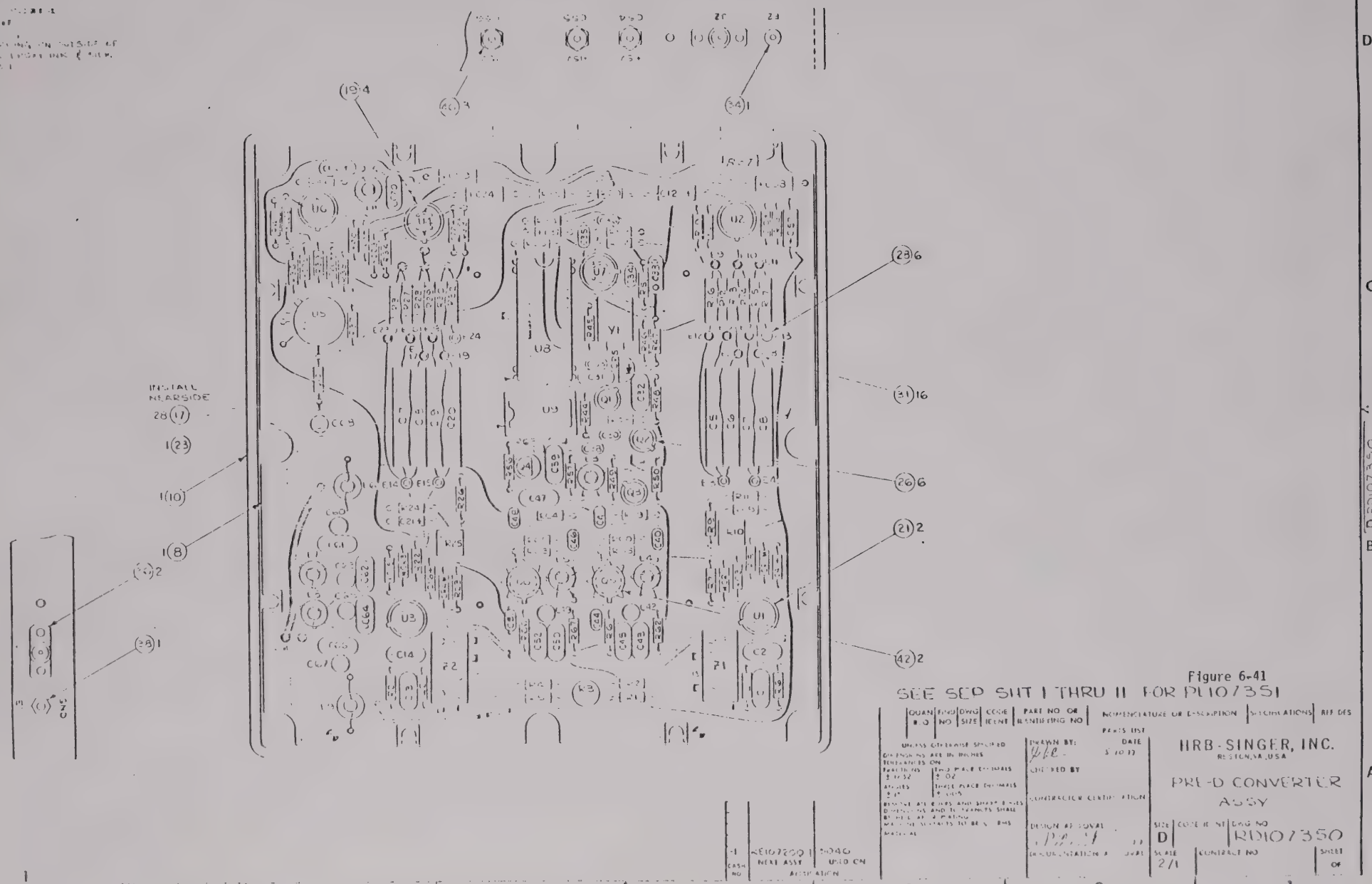
DRAWN BY: [signature] DATE 5-6-77
CHECKED BY
CONTRACTOR CERTIFICATION
DESIGN ACTIVITY: [signature] 5-6-77
DOCUMENTATION ACTIVITY

HRB-SINGER, INC.
RESTON, VA, U.S.A.

PRE-D CONVERTER SCHEMATIC

SIZE D | CODE IDENT | DWG NO RD107352
SCALE | CONTRACT NO. | SHEET OF

-1 | RD107350-1 | 5046
DASH NO | NEXT ASSY | USED ON
APPLICATION


INSTALL NEARSIDE
28(17)
1(23)
1(10)
1(8)
(24)2
(38)1
(19)4
(40)3
(34)1
(28)6
(31)16
(26)6
(21)2
(42)2
U1
U2
U3
U4
U5
U6
U7
U8
U9
U10
U11
U12
U13
U14
U15
U16
U17
U18
U19
U20
U21
U22
U23
U24
U25
U26
U27
U28
U29
U30
U31
U32
U33
U34
U35
U36
U37
U38
U39
U40

SECTION VII

PARTS LIST

NOTES:

1. Slides, Item 126, are optional and must be specified by the contract of each job.

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	2-18-77	
B	REVISED	3-25-77	
C	REVISED	6-2-77	

DASH	NEXT ASSY	USED ON APPLICATION
-2	RE107200-2	5046
-1	RE107200-1	5046

DRAWN BY: D. Carroll

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: Richard Strauss

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

RECEIVER R1300 PARTS LIST

SIZE	CODE IDENT	DWG NO.	
A		PL	107201

CONTRACT NO.

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 2 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X			RE107200-1		R1300 RCVR,.5,1,2 MHz
2			X				RE107200-2		R1300 RCVR, 1,2,4 MHz
3									
4									
5			1	1			RE107200-5		ENCLOSURE
6			1	1			RE107200-6		DECK PLATE
7			1	1			RE107200-7		CARD RACK,SIDE
8			1	1			RE107200-8		CARD RACK,SIDE
9			1	1			RE107200-9		CARD RACK,LEFT
10			1	1			RE107200-10		CARD RACK,RIGHT
11			1	1			RE107200-11		DECK PLATE
12									
13			2	2			RE107200-13		MOUNTING BLOCK
14			1	1			RE107200-14		MOUNTING BRKT
15			2	2			RE107200-15		COVER
16			1	1			RE107200-16		BRACKET
17			1	1			RE107200-17		BRACKET
18			1	1			RD107203-1		FRONT PANEL
19			REF	REF			RC107204-1		SILKSCREEN FRONT
20			REF	REF			RC107205-1		SILKSCREEN,REAR
21			1	1			RE107200-21		COVER,TERM. STRIP
22									
23			1	1			RC105569-1		HOUSING,AIR FILTER
24			1	1			RC105570-1		FILTER,AIR
25			REF				RE107202-1		SCHEMATIC

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 3 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26			REF				RE107202-2		SCHEMATIC
27			REF	REF			RD107206-1		SCHEMATIC,FRONT PANEL
28									
29									
30			1	1			RD107358-1		COVER,TOP
31			1	1			RD107367-2		COVER,TOP
32			1	1			RD107367-1		COVER,BOTTOM
33			1	1			RC107253-1		GASKET SYNTHESIZER
34			1	1			RC107254-1		COVER,TOP,SYNTHESIZER
35									
36									
37			2	2			RC107217-3		GASKET,1st & 2d CONV.
38			1	1			RC107237-3		GASKET,3rd CONV.
39			2	2			RC107217-7		ABSORBER,1st & 2d CONV.
40			1	1			RC107217-2		COVER,2d CONV.
41			1	1			RC107217-1		COVER,1st CONV.
42			1	1			RC107237-1		COVER,3d CONV.
43									
44			1	1			RD107210-1	A1	1st CONV. ASSY
45			1	1			RD107220-1	A2	2d CONV. ASSY
46			1	1			RD107230-1	A3	3d CONV. ASSY
47			1	1		LARK ENG. CO., INC.	362021.4-17-6AA	FL2	FILTER
48			1	1		FREQUENCY WEST	MO-112-43	Z2	2d LO
49			1	1			RC107237-5		ABSORBER,3d CONV.
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 4 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51			1	1			RD107290-1	A6	YIG DRIVER ASSY
52									
53			1	1			RD107300-1	A9	R1300 LOGIC WW ASSY
54									
55			1	1			RD107310-1	A10	MOTHER BD PC ASSY
56			1	1			RC105061-2	A11	5 DIGIT READOUT PC ASSY
57			1	1			RD107240-1	A5	SYNTHESIZER PC ASSY
58			1	1			RD107250-1		SYNTHESIZER HOUSING ASSY
59			1	1			RD107350-1	A13	PRE-D CONVERTER
60			1	1			RD107360-1	A12	PRE-SELECTOR
61			1	1			RD107330-1	A7	POWER SUPPLY PC ASSY
62									
63			1	1			RC107340-1	A4	REF OSC. PC ASSY
64			1				RC107260-2	A10A4	VIDEO FILTER PC ASSY
65				1			RC107260-1	A10A4	VIDEO FILTER PC ASSY
66			1				RC105865-2	A10A5	AM/FM DET.PC ASSY
67				1			RC105865-3	A10A5	AM/FM DET.PC ASSY
68			1	1			RC105115-1		EXTENDER PC ASSY
69			1				RC105935-1	A10A3	21.4 IF AMP PC ASSY
70				1			RC105197-1	A10A3	21.4 IF AMP PC ASSY
71				1			RC105202-1	A10A2	21.4 IF PRE SELECTOR PC
72			1				RC105857-1	A10A2	21.4 IF PRESELECTOR PC
73			1	1			RC105998-1	A10A1	PRE-D IF PC ASSY
74			2	2			RC105394-1		SHIELD
75			1	1			RC107320-1	A8	RCVR Manual Tuning Assy

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 5 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
76						GRAYHILL	80-500-A61-61		WHITE BUTTON
77						HOT STAMP BUTTONS USING STYLE	1GH125 USING BLACK FILLER		
78									
79						ORDER FOLLOWING BUTTON LEGENDS			
80									
81			1	1		AM			
82			1	1		FM			
83			2	2		AGC			
84			2	2		MAN			
85			1	1		LOG			
86				1		.5			
87			1	1		1			
88			1	1		2			
89			1			4			
90			1	1		PYTRONICS	PI 1030	M2	METER
91			1	1		PYTRONICS	PI 1029	M1	METER
92			1	1		DISC	862A-500-0ALP-TTL	Z1	SHAFT ENCODER
93							PER A2787 REV.E except temp 0-55^{0}C		
94			2 PR	2PR		WESTON	7110-1111000		BRACKET STUD
95			4	4		RA THEON	50-2WD-1G		KNOB
96			1	1		ALCO	K-1251BS ¼		KNOB
97									
98			1	1		ALCO	KR-1		SHAFT ADAPTER
99			1	1		INDUSTRIAL ELECT. ENG. INC.	22463-03		BEZEL
100									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 6 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101									
102									
103			9	9		GRAYHILL	80-01-01	S2 THRU S10	Momentary, Switch Spot
104			1	1		GRAYHILL	80-01-08	S11	Momentary SW DP DT
105			1	1		CLARE PENDER	4112C/C1960 AW	S1	Switch with white button
106							Legend to be .160	Regular block	
107							POWER using black		
108							filter on white	button	
109									
110			2	2		CLARE PENDER	A475	DS2/DS3,DS9/DS10	MULT. LIGHT ADAPTER
111									
112			1	1		CLARE PENDER	C475-1A-WW-WW-WW-WW		White quad lens
113							Legend to be .160	Regular block, use	standard method A
114							with black filler		
115							Top to read: LOCAL		
116							Bottom to read: REMOTE		
117									
118									
119									
120			1	1		CLARE PENDER	C475-1B-WR-WR-WW-WW		Red/White quad lens
121							Engrave .160	Regular block use	standard method A
122							with black filler		
123							Top (red) to read:	OPEN	
124							Bottom (white) to	read: LOCK	
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 7 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
126			REF	REF		CHASSIS TRAK	C-300-S-120		SLIDES (SEE NOTE)
127							WITH OPTIONAL		
128							REV"C" CABINET		
129							MOUNTING		
130									
131			2	2		CTC	415-1280-01-12		HANDLE
132			2	2		CTC	415-1280-02-12		HANDLE
133			8	8		CTC	415-1211-01-12		FERRULE
134									
135			17	17		AMP	61323-1	A10-P2 THRU P5	SLIP ON CONNECTORS
136								A7-P6 THRU P18	
137			1	1		CINCH JONES	353-11-10-001	TB1	TERMINAL STRIP
138			1	1		CINCH JONES	363-11-10-010		MARKER STRIP
139			4	4		H.H.SMITH	8703		SPACER
140			2	2		AB	70A1N040R103M	R2,R4	VARIABLE RESISTOR
141									
142									
143			1	1		AB	70A1N040R103A	R1	VARIABLE RESISTOR
144									
145			1	1		AB	70A1N040R252M	R3	VARIABLE RESISTOR
146									
147			AR	AR		SPECTRA-STRIP	455-044-20		CABLE,20 COND.
148									
149			AR	AR			RG188/U		COAX CABLE
150			2	2		AMP	2-331350-4		BNC CRIMP PLUG

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 8 OF 10 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
151									
152									
153			5	5		AMP	1-331693-2	J5,J6,J7,J10,J4	BNC CONNECTOR
154									
155			4	4			UG-1094/U	J1,J2,J8,J9	BNC CONNECTOR
156			4	4		H.H.SMITH	1497		GRD LUG
157									
158			2	2		SWITCHCRAFT	L11	J11,J14	PHONE JACK
159			3	3		OMNI SPECTRA	501-3	A2P2,A13P1,A13P2	CONNECTOR
160			1	1		CORCOM	6J4	J13	AC CONNECTOR
161			1	1		CORCOM	80-1245		PLUG & CORD ASSY
162			1	1		PAMOTOR	8500C	B1	FAN
163			1	1		PAMOTOR	5505		PLUG & CORD ASSY
164									
165			1	1		BENDIX	PT02CE-20-41S	J12	CONNECTOR
166							PT06CE-20-41P(SR)	J12 Mate	
167			1	1		ALCO	MST-115D	S12	SWITCH
168			1	1		EVEREADY	4/B50T	BT1	BATTERY, 6V.
169			1	1		BERKSHIRE	BTC-11425	T1	TRANSFORMER
170									
171			5	5		STANDARD LOGIC	28RS-036 36"		CABLE
172									
173			1	1		AUGAT	6016-11A		CLIP
174									
175									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 9 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
176			AR	AR		LOCTITE CORP	TYPE 222		LOCTITE
177			8	8		AMATOM	8108-B-0440-3A		STANDOFF
178			26	26		AMATOM	8111-B-0440-3A		STANDOFF
179			10	10		AMATOM	8109-B-0440-3A		STANDOFF
180			AR	AR		GOODYEAR			ADHESIVE
181									
182									
183			4	4		PENN ENGINEERING	FHS-632-8		PEM STUD (6-32x½LG)
184			4	4		PENN ENGINEERING	FHS-440-7		PEM STUD(4-40x7/16LG)
185			18	18		PENN ENGINEERING	CLS-440-2		PEM NUT
186			29	29		PENN ENGINEERING	CLS-632-2		PEM NUT
187			8	8		PENN ENGINEERING	CLSS 032-2		PEM NUT
188			4	4		BIRTCHER	35-7B-1-3-3		PCB-TAINER
189			12	12		BIRTCHER	35-7B-2-3-3		PCB-TAINER
190									
191			12	12		SPS	MA13600-40		ANCHOR NUT
192			4	4		AMATOM	8113-B-0440-3A		SPACER
193			5	5		AMP	51563-8	A10P1,A10P6,A10P7,	CONNECTOR
194								A10P8,A10P9	
195									
196			2	2		3/32 DIA x 3/16LG	MS20470AD3-3		RIVET,UNIV. HD.
197			21'	21'			RG188/U		CABLE,COAX
198			24	24		3/32 DIA x ¼ LG	MS20426AD3-4		RIVET,100'CSK HD.
199			32	32		1/16 DIA x 3/16 LG	MS20470AD2-3		RIVET, UNIV. HD.
200									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107201	SHEET 10 OF 10 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
201			14	14		AMERICON	2001-7985	A12P2,A1P1,A1P3,	PLUG,STRAIGHT
202								A1P2,A1P6,FL2P1,	SMA,MALE
203								FL2P2,Y1P1,A2P1,	
204								A2P3,A3P3,A3P1,	
205								A2P2,A2P4	
206									
207									
208			AR	AR		UNIFORM TUBE	UT-141		COAX,SEMIRIGID(.141 O.D.)
209			AR	AR		UNIFORM TUBE	UT-85		COAX,SEMIRIGID(.085 O.D.)
210									
211									
212			6	6		SEALECTRO	51-011-000	A4P1,A5P6,A5P2,	CONNECTOR
213								A5P1,A5P5,A5P4,	
214									
215			1	1		OMNI-SPECTRA	OSM201-1A	A12P1	PLUG,STRAIGHT,SMA,MALE
216			1	1		CINCH	251-18-30-160		CONNECTOR
217									
218									
219			1	1		CONTINENTAL	K-600-121-15XA		CONNECTOR
220						OMNI-SPECTRA	OSN410-1	J3	CONNECTOR,TYPE N
221									
222			1	1		3M SCOTCH FLEX	3421-3000	A10P11	CONNECTOR
223									
224			3	3		EECO	H2723-02	A10P10	PLUG
225									

NOTES:

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11-9-76	GGP
B	REVISED	2-17-77	GGP
C	ADDED ITEM 18	8-18-77	GGP

DASH NO.	NEXT ASSY (APPLICATION)	USED ON (APPLICATION)
-1	RD107210-1	504601

DRAWN BY: W. M. 8-26-76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: G. Paffumi 2-23-77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

1ST CONVERTER

SIZE	CODE IDENT	DWG NO.
A		PL 107211

CONTRACT NO.

SHEET 1 OF 5

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107211	SHEET 2 OF 5 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RD107210-1		ASSEMBLY
2									
3									
4									
5				REF		HRB-SINGER	PL107211-1		PARTS LIST
6									
7									
8									
9				REF		HRB-SINGER	RD107212-1		SCHEMATIC
10									
11									
12									
13				1		HRB-SINGER	RD107215-1		PC DETAIL
14									
15									
16				1		HRB-SINGER	RC107218-1		HEAT SINK
17				1		HRB-SINGER	RC107216-1		HOUSING
18									
19				AR				L1,L2	#24 AWG TINNED
20									COPPER WIRE
21									
22									
23				AR		WAKEFIELD	128		THERMAL COMPOUND
24				AR		EMERSON & CUMING	56C		CONDUCTIVE EPOXY
25				2		THERMALLOY	7717-43N		TRANSISTOR PAD

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107211	SHEET 3 OF 5 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				1		CTC	160-2051-01-	E1	TERMINAL
27							01-00		
28				4		MODPAK	SMA	J1,J2,J3,J4	CONNECTOR
29									
30									
31									
32				AR		QQ-S-571	SN60WRMAP2		SOLDER
33									
34				AR		KESTER			44 RESIN CORE SILVER
35									SOLDER, FLUX CONTENT
36									66, .035 DIA,ALLOY
37									3S/61.5T/35.5L
38									
39				1		EMC	AC0103	A1	ATTENUATOR 3db
40									
41				1		MSC	80264	Q4	TRANSISTOR
42									
43				1		AR ANZAC	AM-584	U1	AMPLIFIER
44									
45				1		WJ	M5R	Z1	MIXER
46									
47				1		HP	35828E	Q1	TRANSISTOR
48									
49				2		MOTOROLA	2N3906	Q2,Q3	TRANSISTOR
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107211	SHEET 1 OF 5 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				1		ERIE	1201-054	C1	CAPACITOR,FT 1500pf
52									200V
53									
54				1		SPRAGUE	CS13BF105K	C3	CAPACITOR 1µf 35V
55									
56				7		SPRAGUE	TGS-10	C2,C4,C5	CAPACITOR .01µf
57								C14-C17	
58									
59									
60				4		JOHANSON	9401-2	C6,C8	CAPACITOR 0.5-2.0pf
61								C10,C11	
62									
63				4		AVX CERAMICS	EF-5	C7,C9	CAPACITOR 500pf
64								C12,C13	
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107211	SHEET 5 OF 5 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
76				2		OHMITE	RCR07G271JS	R1,R3	RESISTOR 270Ω ¼W 5%
77									
78				1		OHMITE	RCR07G180JS	R2	RESISTOR 18Ω ¼W 5%
79									
80				4		OHMITE	RCR07G102JS	R4,R5,R9,R10	RESISTOR 1K ¼W 5%
81									
82				1		OHMITE	RCR07G222JS	R6	RESISTOR 2.2K ¼W 5%
83									
84				1		OHMITE	RCR07G221JS	R7	RESISTOR 220Ω ¼W 5%
85									
86				1		OHMITE	RCR07G331JS	R8	RESISTOR 330Ω ¼W 5%
87									
88				1		OHMITE	RCR20G510JS	R11	RESISTOR 51Ω ½W 5%
89									
90				2		OHMITE	RCR07G101JS	R16,R24	RESISTOR 100Ω ¼W 5%
91									
92				4		OHMITE	RCR07G680JS	R17,R19,R21,R23	RESISTOR 68Ω ¼W 5%
93									
94				3		OHMITE	RCR07G470JS	R18,R20,R22	RESISTOR 47Ω ¼W 5%
95									
96				3		OHMITE	RCR07G150JS	R25,R26,R27	RESISTOR 15Ω ¼W 5%
97									
98									
99									
100									

NOTES:

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11-1-76	GCP
B	REVISED	11-9-76	GCP
C	REVISED	2-17-77	GCP
D	ADDED ITEM 24	8-18-77	GCP

DRAWN BY: W. M. 8-26-76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: G. Pfefferkorn 2-23-77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

2ND CONVERTER

SIZE	CODE IDENT	DWG NO.
A		PL 107221

CONTRACT NO.

SHEET 1 OF 7

DASH NO.	NEXT ASSY	USED ON
	APPLICATION	
-1	RD107220-1	504601

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107221	SHEET 2 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RD107220-1		ASSEMBLY
2									
3									
4									
5				REF		HRB-SINGER	PL107221-1		PARTS LIST
6									
7									
8									
9				REF		HRB SINGER	RD107222-1		SCHEMATIC
10									
11									
12									
13				1		HRB-SINGER	RD107225-1		PC DETAIL
14									
15									
16									
17				1		HRB-SINGER	RC107226-1		HOUSING
18									
19									
20									
21									
22									
23									
24				AR		EMERSON & CUMING	56C		CONDUCTIVE EPOXY
25									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107221	SHEET 3 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				1		CTC	2051	E1	TERMINAL
27									
28				4		MODPAK	SMA	J1,J2,J3,J4	CONNECTOR
29									
30									
31									
32				AR		QQ-S-571	SM60WRMAP2		SOLDER
33									
34				AR		KESTER			44RESIN CORE SILVER
35									SOLDER, FLUX CONTENT
36									66,.035 DIA,ALLOY
37									3S/61.5T/35.5L
38									
39									
40				1		THERMALLOY	7717-22N		TRANSISTOR PAD
41									
42									
43									
44				1		WJ	M5R	Z1	MIXER

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107221	SHEET 4 OF 7 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				1		HP	35828E	Q1	TRANSISTOR
52									
53									
54				1		MOTOROLA	2N5943	Q2	TRANSISTOR
55				1		TRW	2N4429	Q3	TRANSISTOR
56									
57				1		MOTOROLA	2N3906	Q4	TRANSISTOR
58									
59									
60									
61									
62				2		TEXAS INSTRUMENTS	1N459A	CR1,CR2	DIODE
63									
64									
65									
66				1		ERIE	1201-054	C1	CAPACITOR 1500pf
67									200V
68									
69				2		JOHANSON	9401-2	C3,C8	CAPACITOR 0.5-2.0pf
70									
71									
72									
73									
74				2		AVX CERAMICS	EF-5	C6,C7	CAPACITOR 500pf
75									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107221	SHEET 6 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101				1		LENNOX-FUGLE	NR-0.12	L7	INDUCTOR 0.12μh
102									
103									
104									
105									
106									
107									
108				3			RCR07G102JS	R1,R5,R15	RESISTOR 1K ¼W ±5%
109									
110				1			RCR07G222JS	R2	RESISTOR 2.2K ¼W ±5%
111									
112				1			RCR07G221JS	R3	RESISTOR 220Ω ¼W ±5%
113									
114				1			RCR07G561JS	R4	RESISTOR 560Ω ¼W ±5%
115									
116									
117									
118				1			RCR07G103JS	R6	RESISTOR 10K ¼W ±5%
119									
120				2			RCR07G101JS	R7,R9	RESISTOR 100Ω ¼W ±5%
121									
122				1			RCR07G100JS	R8	RESISTOR 10Ω ¼W ±5%
123									
124				1			RCR07G272JS	R10	RESISTOR 2.7K ¼W ±5%
125									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107221	SHEET 7 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
126				1			RCR07G331JS	R11	RESISTOR 330Ω ¼W ±5%
127									
128				1			RCR07G271JS	R12	RESISTOR 270Ω ¼W ±5%
129									
130				1			RCR07G220JS	R13	RESISTOR 22Ω ¼W ±5%
131									
132				4			RCR07G150JS	R14,R16,R17	RESISTOR 15Ω ¼W ±5%
133								R18	
134									
135									
136									
137									
138									
139									
140									
141									
142									
143									
144									
145									
146									
147									
148									
149									
150									

NOTES:

REVISION

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11-9-76	GGP
B	REVISED	2-16-77	GGP
C	REVISED	3-25-77	GGP
D	REVISED	9-9-77	XRC

-1	RC107230-1	504601
DASH NO	NEXT ASSY APPLICATION	USED ON

DRAWN BY: W.M. 8-26-76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: G. Patterson 2-23-77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

3RD CONVERTER

SIZE	CODE IDENT	DWG NO.	
A		PL	107231

CONTRACT NO.

SHEET 1 OF 4

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107231	SHEET 2 OF 4 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC107230-1		ASSEMBLY
2									
3									
4									
5				REF		HRB-SINGER	PL107231-1		PARTS LIST
6									
7									
8									
9				REF		HRB-SINGER	RD107232-1		SCHEMATIC
10									
11									
12									
13				1		HRB-SINGER	RC107235-1		PC DETAIL
14									
15									
16									
17				1		HRB-SINGER	RC107236-1		HOUSING
18									
19				1		EMERSON & CUMING	56C		CONDUCTIVE EPOXY
20									
21									
22									
23									
24									
25									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107231	SHEET 3 OF 4 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				1		CTC	2051	E1	TERMINAL
27									
28				3		MODPAK	SMA	J1,J2,J3	CONNECTOR
29									
30									
31									
32				AR		QQ-S-571	SN60WRMAP2		SOLDER
33									
34				AR		KESTER			44 RESIN CORE SILVER
35									SOLDER, FLUX CONTENT
36									66,.035 DIA,ALLOY
37									3S/61.5T/35.5L
38									
39				1		EMC	AC0108	A1	CHIP ATTENUATOR 8db
40									
41									
42									
43				1		WJ	M4G	Z1	MIXER
44									
45				1		AMPEREX	ATF-417	U1	IC
46									
47				AR					#20 AWG TINNED
48									COPPER WIRE
49									
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107231	SHEET 4 OF 4 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				1		ERIE	1201-054	C1	CAP,FT 1500pf
52									200V
53									
54				1		SPRAGUE	CS13BF105K	C2	CAP 1µf 35V
55									
56				3		VITRAMON	VJ0805A1R5DF	C3,C5,C6	CAP,CHIP 1.5pf
57									
58				2		VITRAMON	VJ0805A120JF	C4,C12	CAP,CHIP 12pf
59									
60									
61									
62									
63				2		VITRAMON	VJ0805A4R7DF	C10,C11	CAP,CHIP 4.7pf
64									
65									
66									
67				1		AVX CERAMICS	EF-5	C9	CAP 500pf
68									
69									
70									
71									
72									
73									
74									
75									

NOTES:

REVISION

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	3/25/77	GGP
B	REVISED	9/8/77	XPi

-1	RC107340-1	504601
DASH NO.	NEXT ASSY	USED ON
	APPLICATION	

DRAWN BY: D. Carroll 1/7/77

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: Rosica 9/8/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

REFERENCE OSCILLATOR PARTS LIST

SIZE	CODE IDENT	DWG NO.
A		PL 107341

CONTRACT NO.

SHEET 1 OF 3

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107341	SHEET 2 OF 3 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				1		HRB-SINGER	RC107340-1		ASSEMBLY
2									
3									
4									
5				1		HRB-SINGER	RC107345-1		PL DETAIL
6									
7				REF		HRB-SINGER	RC107342-1		SCHEMATIC
8									
9									
10				1		JBT	T08-223	S1	SWITCH
11									
12				1		GREENRAY	ZYH10101	Y1	10Mhz XTal OSC
13									
14				1		SIGNETICS	N8290A	U1	IC
15									
16				1		NATIONAL	LH0002C	U2	IC
17									
18				3			RCR07G103JS	R1 R8 R9	10K 5% CARBON RESISTOR
19									
20				5			RCR07G101JS	R2 R4 R6 R3 R5	100 OHM 5% CARBON RESISTO
21									
22				1			RCR07G102JS	R7	1K 5% CARBON RESISTOR
23				2			1N4153	CR1 CR2	DIODE
24									
25									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107341	SHEET 3 OF 3 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				2		SPRAGUE	CS13BF105K	C3 C2	CAPACITOR TANT 1uf
27									
28				1		CDE	wmF 1P1	C1	CAPACITOR .1 uf
29									
30				2		SPRAGUE	TGS-10	C4 C5	CAPACITOR .01uf
31									
32				1		SELECTRO	51-051-0000	J1	CONNECTOR
33									
34				5		CTC	160-1558-02-01-00	E1 thru E5	TERMINAL
35									
36				1		AUGAT	8058-1G49	XU2	SOCKET 8 PIN
37									
38				1		AUGAT	514-AG10D	XU1	SOCKET 14 PIN
39									
40				2		ERIE	8131-050651-105M	C6 C7	CAPACITOR 1 uf
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									

NOTES:

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11-29-76	
B	REVISED	12-21-76	
C	REVISED	2-16-77	
D	REVISED	3-25-77	
E	REVISED	9-8-77	

DRAWN BY: G. ADAMS 11-1-77

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: 11-3-77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

71.4MHz TO 621.4MHz
SYNTHESIZER

SIZE	CODE IDENT	DWG NO.
A		PL 107241

CONTRACT NO.

SHEET 1 OF 8

DASH NO.	NEXT ASSY	USED ON
-1	RD107240-1	50160102
	APPLICATION	

RE 310

TES:

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11-29-76	
B	REVISED	12-21-76	
C	REVISED	2-16-77	
D	REVISED	3-25-77	
E	REVISED	9-8-77	

DRAWN BY: G. ADAMS 11-1-77

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: 11-3-77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

71.4MHz TO 621.4MHz
SYNTHESIZER

SIZE	CODE IDENT	DWG NO.
A		PL 107241

CONTRACT NO.	SHEET
	1 OF 8

1	RD107240-1	50160102
SH	NEXT ASSY	USED ON
	APPLICATION	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107241	SHEET OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RD107240-1		PC ASSY 71.4MHz TO
2			X						621.4MHz SYNTHESIZER
3		X							
4	X								
5				REF		HRB-SINGER	RE107242-1		SCHEMATIC DIAGRAM
6									
7				1		HRB-SINGER	RD107245-1		PC DETAIL
8									
9				2		HRB-SINGER	RA107246-1		HEAT SINK
10									
11				AR		ALPHE	238		SILVER SOLDER
12									
13				4		AUGAT	8058-1G49	XU4,XU20,XU21,XU22	TO-5 8 PIN SOCKET
14									
15				4		AUGAT	8058-1G91	XU18,XU19,XU23,XU24	TO-5 10 PIN SOCKET
16									
17				5		SEALECTRO	51-053-0000	J1,J2,J4,J5	CONNECTOR
18								J6	
19				8		AUGAT	516-AG10D		16 PIN SOCKET
20									
21				5		AUGAT	514-AG10D		14 PIN SOCKET
22				AR		WAKEFIELD	128		THERMAL COMPOUND
23				2		IERC	DC000080B		RETAINER CLIP
24				2					
25				32		EMC	6984-301		PC JACK

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107241	SHEET OF 8 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				15		SPRAGUE	TGS-10	C1,C4,C5,C10,C14	CAPACITOR .01µf DISC
27								C15,C2,C17,C18,C19	
28								C20,C21,C22,C72	
29								C74	
30									
31				3		AMERICAN TECH CERAMICS	700B-102-J-C-50	C7,C39,C73	CAPACITOR 1000pf CHIP
32				30		ERIE	8101-050-651-102M	C8,C9,C11,C45-C71	CAPACITOR 1000pf
33									
34				11		SPRAGUE	CS13BF105K	C12,C13,C23,C24,C25	CAPACITOR 1µf 35V
35								C27,C30,C32,C33,C36	
36								C38	
37				1		ERIE	518-000-A-5-25	C26	CAPACITOR 5-25pf
38									
39				1		ELMENCO	DM15-300J	C28,	CAPACITOR 30pf MICA 5%
40				1		ELMENCO	DM15-221J	C31	CAPACITOR 220p 5%MICA
41				1		CDE	WMF-1D47	C29	CAPACITOR .0047µf MYLAR
42				1		CDE	WMF 1S1	C35	CAPACITOR .01µf MYLAR
43				1		CDE	WMF 47P1	C34	CAPACITOR .47 MYLAR
44									
45									
46									
47									
48									
49				3		SPRAGUE	CS13BD226K	C40,C41,C42	CAPACITOR 22µf 15V
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107241	SHEET 4 OF 8 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				2			1N5313	CR1,CR2	DIODE
52									
53				2		MOTOROLA	1N4734A	CR3,CR4	DIODE
54									
55				2		TEXAS INSTRUMENTS	1N4153	CR5,CR6	DIODE
56									
57									
58									
59				1		NYTRONICS	WEE-10	L1	INDUCTOR 10μh
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71				9			RCR07G102JS	R5,R27,R29,R31,R61	RESISTOR 1K ¼W 5%
72								R38,R50,R64,R56,	
73				4			RCR07G2R7JS	R7,R8,R17,R18	RESISTOR 2.7-OHM ¼W 5%
74									
75				1			RCR07G680JS	R4	RESISTOR 68 OHMS ¼W 5%

PARTS LIST | ...RB- ...NC..., II.. RESTON, VIRGINIA | CONTINUATION SHEET | E IDENT FL 10/241 | ... OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76				4			RCR07G820JS	R9,R10,R19,R20	RESISTOR 820HMS ¼W 5%
77									
78				2			RCR07G222JS	R11,R12	RESISTOR 2.2K ¼W 5%
79									
80				4			RCR07G121JS	R13,R14,R21,R23	RESISTOR 120-OHMS ¼W 5%
81									
82				6			RCR07G150JS	R15,R16,R22,R24	RESISTOR 15-OHMS ¼W 5%
83									
84				2			RCR07G470JS	R25,R28	RESISTOR 47-OHMS ¼W 5%
85				2			RCR07G101JS	R58,R59	RESISTOR 100-OHMS ¼W 5%
86				1			RCR07G104JS	R26	RESISTOR 100K ¼W 5%
87				4			RCR07G153JS	R34,R43,R51,R57	RESISTOR 15K ¼W 5%
88									
89									
90				2			RCR07G103JS	R32,R33	RESISTOR 10K ¼W 5%
91				1			RN55C1021F	R39	RESISTOR 1.02K 1%
92				1			RN55C1002F	R35,	RESISTOR 10K 1%
93				1			RN55C2002F	R36	RESISTOR 20K 1%
94				6			RCR07G220JS	R37,R41,R44,R45	RESISTOR 22-OHMS ¼W 5%
95								R53,R60	
96				2			RCR07G271JS	R1,R2	RESISTOR 270-OHM ¼W 5%
97									
98				1			RN55C2211F	R40	RESISTOR 2.21K 1%
99									
100				1			RCR07G180J7	R54	RESISTOR 18-OHM ¼W 5%

PARTS LIST | ARB-SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 107241 | SHEET 6 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
101				1			RCR07G153JS	R42	RESISTOR 15K OHMS ¼W 5%
102									
103				1			RCR07G561JS	R66	RESISTOR 560Ω ¼W 5%
104									
105				1			RCR07G333JS	R49	RESISTOR 33K ¼W 5%
106									
107				1			RCR07G683JS	R48	RESISTOR 68K ¼W 5%
108									
109				1			RCR07G124JS	R47	RESISTOR 120K ¼W 5%
110									
111				1			RCR07G471JS	R52	RESISTOR470 OHMS ¼W 5%
112									
113				1			RCR07G101JS	R55	RESISTOR 100Ω ¼W 5%
114									
115				1			RCR07G181JS	R65	RESISTOR 180Ω ¼W 5%
116									
117				5		SEALECTRO	226-4017-00-0-200	TP1-TP4,TP6	TEST POINT
118									
119				1		MERRIMAC	C-115	DC1	20db DIR COUPLER
120									
121				2		AMPEREX	ATF417	U1,U5	IC
122									
123				1		FAIRCHILD	11C06DC	U2	IC
124									
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107241	SHEET 1 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126				1		FAIRCHILD	11C90DC	U3	IC
127									
128				1		NSC	LM311H	U4	IC
129									
130									
131									
132				1		TEXAS INSTRUMENTS	SN74390N	U6	IC
133									
134				5		AMD	SN74S160N	U7,U8,U9,U10,U11	IC
135									
136				1		TEXAS INSTRUMENTS	SN74S40N	U12	IC
137									
138				1		TEXAS INSTRUMENTS	SN74S04N	U13	IC
139									
140				1		MOTOROLA	MC4044P	U14	IC
141									
142				1		NSC	MM74C04N	U15	IC
143									
144				1		NSC	MM74C00N	U16	IC
145									
146				1		RCA	CD4027AD	U17	IC
147									
148				4		SILICONIX	DG181BA	U18,U19,U23,U24	IC
149									
150									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107241	SHEET OF 8 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151				1		PRECISION MONOLITHICS	OP-05	U22	IC
152									
153				1		NSC	LF356H	U21	IC
154									
155				1		RCA	CA3100T	U20	IC
156									
157				1		NSC	LH2311D	U25	IC
158									
159									
160									
161									
162									
163									
164									
165									
166									
167									
168									
169									
170									
171									
172									
173									
174									
175									

NOTES:

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	11/29/76	[illegible] 2/28/77
B	REVISED	2/17/77	[illegible] 2/28/77

DRAWN BY: F.R.

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: [illegible] 2/28/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

COARSE YIG DRIVER
PC ASSEMBLY

SIZE	CODE IDENT	DWG NO.
A		PL 107271

CONTRACT NO.

SHEET 1 OF 4

DASH NO.	NEXT ASSY	USED ON
-1	RC107270-1	504601

APPLICATION

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107271	SHEET 2 OF 4 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC107270-1		ASSEMBLY
2			X						
3		X							
4	X								
5				REF		HRB-SINGER	RD107292-1		SCHEMATIC DIAGRAM
6									
7				1		HRB-SINGER	RC107275-1		PC DETAIL
8									
9									
10									
11									
12									
13									
14									
15				1		AUGAT	516-AG10D		IC SOCKET 16 PIN
16									
17				1		THERMALLOY	7717-43N		TRANSISTOR PAD
18									
19				2		AUGAT	8058-1G49		IC SOCKET 8 PIN
20									
21				11		CAMBION	1558-2	E1,E2,E3,E4,E5,	TERMINAL
22								E6,E7,E8,E9,E10	
23								E11	
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107271	SHEET 3 OF 4 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				2		ELMENCO	DM15-300J	C4,C8	CAP 30pf 5%
27									
28				3		SPRAGUE	150D105X9035A	C3,C5,C6	CAP TANT 1µf 35V
29									
30				1		SPRAGUE	150D156X9020B2	C1	CAP TANT 15µf 20V
31				1		SPRAGUE	150D475X9020B2	C2	CAP TANT 4.7µf 20V
32				3		MALLORY	MTP606M020P1B	C7,C9,C10	CAP TANT 60µf 20V
33									
34									
35				2		MOTOROLA	1N5313	CR1,CR4	DIODE CONSTANT CURRENT
36				1		FAIRCHILD	1N4153	CR3	DIODE
37									
38				2		MOTOROLA	1N827A	CR2,CR5	DIODE
39									
40				1		BOURNS	3290W-1-103	R1	RESISTOR 10K POT
41									
42				1		BOURNS	3290W-1-502	R4	RESISTOR 5K POT
43									
44				2		OHMITE	RCR07G101J	R5,R6	RESISTOR 100Ω ¼W 5%
45									
46				1		OHMITE	RCR07G470J	R9	RESISTOR 47Ω ¼W 5%
47									
48				1		OHMITE	RCR07G181J	R11	RESISTOR 180Ω ¼W 5%
49									
50				1		MOTOROLA	2N3906	Q1	TRANSISTOR

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107271	SHEET 4 OF 4 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				1		ALLEN BRADLEY	RN55C4752F	R2	RESISTOR 47.5K 1/8W 1%
52									
53				2		ALLEN BRADLEY	RN55C1002F	R10,R3	RESISTOR 10K 1/8W 1%
54									
55									
56									
57				1		ALLEN BRADLEY	RN55C2431F	R7	RESISTOR 2.43K 1/8W 1%
58									
59				2		ALLEN BRADLEY	RN55C1001F	R8,R13	RESISTOR 1K 1/8W 1%
60									
61				1		ALLEN BRADLEY	RN55C8661F	R12	RESISTOR 8.66K 1/8W 1%
62									
63									
64									
65									
66				2		PRECISION MONOLITHIC	OP-05CJ	U1,U2	
67									
68				1		MICRO-NETWORK	MN311	U3	
69									
70									
71									
72									
73									
74									
75									

NOTES:

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	12/1/76	2/24/77
B	REVISED	2/17/77	2/24/77

DRAWN BY: F.R.

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: 2/24/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

FINE YIG DRIVER
PC ASSEMBLY

SIZE	CODE IDENT	DWG NO.
A		PL 107281

CONTRACT NO.

SHEET 1 OF 4

DASH NO.	NEXT ASSY	USED ON
-1	RE107270-1	504601
	APPLICATION	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107281	SHEET 2 OF 4 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC107280-1		ASSEMBLY
2			X						
3		X							
4	X								
5				REF		HRB-SINGER	RD107292-1		SCHEMATIC DIAGRAM
6									
7				1		HRB-SINGER	RC107285-1		PC DETAIL
8									
9									
10									
11									
12									
13									
14									
15									
16				2		AUGAT	8058-1G49	U1,U2	SOCKET 8 PIN TO-5
17									
18				AR		QQ-S-571P	SNGOWRMA-P2		SOLDER
19									
20									
21									
22									
23									
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107281	SHEET 3 OF 4 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				1		ELMENCO	DM15-151J	C2	CAPACITOR 150pf 5%
27									
28				1		ELMENCO	DM15-101J	C4	CAPACITOR 100pf 5%
29									
30				1		ELMENCO	DM15-221J	C3	CAPACITOR 220pf 5%
31									
32				2		SPRAGUE	TGS-10	C7,C9	CAPACITOR .01µf
33									
34				4		SPRAGUE	150D105X9035A	C1,C5,C6,C8	CAPACITOR 1µf 35V
35									
36				1		MOTOROLA	2N4920	Q1	TRANSISTOR
37									
38				1		MOTOROLA	2N4923	Q2	TRANSISTOR
39									
40				1		NSC	LH0002CH	U2	IC
41									
42				1		RCA	CA3100T	U1	IC
43									
44									
45									
46									
47									
48									
49									
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107281	SHEET 4 OF 4 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				2		OHMITE	RCR07G470JS	R1,R3	RESISTOR 47Ω ¼W 5%
52									
53				2		OHMITE	RCR07G4R7JS	R6,R9	RESISTOR 4.7Ω ¼W 5%
54									
55				1		OHMITE	RCR07G102JS	R4	RESISTOR 1K ¼W 5%
56									
57				2		OHMITE	RCR20J100JS	R8,R11	RESISTOR 10Ω ½W 5%
58									
59				4		IRC	RN55C2201F	R2,R5,R12,R13	RESISTOR 2.21K 1/8W 1%
60									
61				2		OHMITE	RCR07G101JS	R7,R10	RESISTOR 100Ω ¼W 5%
62									
63									
64									
65									
66									
67									
68									
69									
70									
71									
72									
73									
74									
75									

NOTES:

REVISIONS

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	12/1/76	
B	REVISED	12/3/76	
C	REVISED	2/17/77	KBQ

DRAWN BY: D. Carroll 9/15/76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL:

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

COARSE/FINE YIG DRIVER ASSEMBLY

SIZE	CODE IDENT	DWG NO.
A		PL 107291

CONTRACT NO.

SHEET 1 OF 2

DASH NO.	NEXT ASSY	USED ON
	APPLICATION	
-1	RE107200-1	504601

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107291	SHEET 2 OF 2 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RD107290-1		ASSY
2									
3									
4									
5				1		HRB-SINGER	RD107290-5		HOUSING
6				1		HRB-SINGER	RD107290-6		COVER, BOTTOM
7									
8				2		HRB-SINGER	RD107290-8		BRACKET
9				4		HRB-SINGER	RD107290-9		STANDOFF
10				4		HRB-SINGER	RD107290-10		STANDOFF
11				2		HRB-SINGER	RD107290-11		STANDOFF
12				2		HRB-SINGER	RD107290-12		STANDOFF
13				1		HRB-SINGER	RC107280-1	A2	FINE YIG DRIVER PC ASSY
14				1		ANSLEY	FSM-21A-10		FLEX STRIP JUMPER
15				REF		HRB-SINGER	RD107292-1		SCHEMATIC
16									
17									
18				1		HRB-SINGER	RC107270-1	A1	COURSE YIG DRIVER PC ASSY
19				1		DALE	NH-5	R1	RESISTOR 60Ω,5WATT
20				1		DALE	NH-5	R2	RESISTOR 150Ω, 5WATT
21				1		MOTOROLA	2N6040	Q1	TRANSISTOR
22				2		WAKEFIELD	260-6SH5B		HEATSINK
23				3		USECO	1496A	E1,E2,E3	STANDOFF
24									
25				1		AVANTEK	AV-7204M	Z1	YIG

NOTES:

REVISION

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	2/7/77	EJG 2/10/77
B	REVISED	3-25-77	KSG

DRAWN BY: R.R. 12/9/76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: K L Q (for) 2/23/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

R1300 POWER SUPPLY

SIZE	CODE IDENT	DWG NO.
A		PL 107331

CONTRACT NO.

SHEET 1 OF 8

DASH NO.	NEXT ASSY APPLICATION	USED ON
-1	RE107200-1	5046

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 2 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X			RD107330-1		ASSEMBLY
2									
3									
4									
5				1			RD107336-1		HEAT SINK
6				1			RD107335-1		PC DETAIL
7				REF			RD107332-1		SCHEMATIC
8									
9									
10									
11				13		AMP	60599-1	J6-J18	CONNECTOR
12				5		CTC	160-1558-03-01-00	E1-E5	TERMINAL
13									
14				2		AMATOM	9737-B-0440-3A		STANDOFF
15				2		H.H. SMITH	2330		SPACER
16									
17				2		THERMALLOY	7717-43N	XQ1,XQ4	TRANSISTOR PAD
18				2		AUGAT	8058-1G49	XU1,XU4	SOCKET 8 PIN TO5
19									
20									
21				2		H.H. SMITH	8884		SPACER
22				2		H.H. SMITH	8835		SPACER
23									
24									
25				AR		WAKEFIELD	128		THERMAL COMPOUND

PARTS LIST	KRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 3 OF 8 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				6		SPRAGUE	CSR13E156KL	C1,C13,C7,	CAP,TANT
27								C8,C9,C14	15µf 20V
28				2		SPRAGUE	CSR13G105KL	C15,C16	CAP,TANT, CAP, 1µF,50V.
29									
30				1		ARCO	CM05FD221J03	C10	CAP, DIPPED MICA
31									220pf 5%
32									
33				2		STM	91M25HA452	C4,C5	CAP,ELECTROLYTIC
34									4500µf 25V
35									
36				1		SPRAGUE	TG-S10	C6	CAP,DISC
37									.01µf 100V
38									
39				1		STM	91S15JA34	C12	CAP,ELECTROLYTIC
40									30,000µf 15V
41									
42				2		SPRAGUE	CSR13E107KL	C3,C11	CAP,TANT
43									100µf 20V
44									
45				1		ARCO	CM05ED300J03	C2	CAP,DIPPED MICA
46									30pf 5%
47									
48									
49									
50									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 4 OF 8 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				2		MOTOROLA	1N5296	CR1,CR11	DIODE, CONSTANT
52									CURRENT .91mA
53									
54				2		MOTOROLA	1N827A	CR2,CR10	DIODE, TEMPER-
55									ATURE-COMPEN-
56									SATED ZENER
57									6.2V 5%
58									
59				2		MOTOROLA	1N4732A	CR3,CR12	DIODE, ZENER
60									4.7V 5%
61									
62				4		MOTOROLA	MR502	CR4-CR7	DIODE, RECT
63									3A 200 PRV
64									
65				2		MOTOROLA	1N4002	CR8,CR9	DIODE,RECT
66									1A 100 PRV
67									
68				4		MOTOROLA	MR751	CR13,CR14	DIODE,RECT
69								CR16,CR17	6V 100 PRV
70									
71									
72				1		G.E.	1N4829	CR15	DIODE,MULTI-
73									PELLET
74									
75									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 5 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76									
77									
78									
79									
80									
81									
82									
83				1		MOTOROLA	2N3906	Q1	TRANSISTOR
84									
85				1		MOTOROLA	2N6036	Q2	TRANSISTOR
86									
87				2		MOTOROLA	2N6039	Q3,Q5	TRANSISTOR
88									
89				1		MOTOROLA	2N3904	Q4	TRANSISTOR
90									
91									
92									
93									
94									
95									
96									
97									
98									
99									
100									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 6 OF 8 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101				2		IRC	RN55C1371F	R1,R15	RESISTOR,METAL FILM
102									1.37K 1% 1/8W
103									
104				2		IRC	RN55C6041F	R2,R16	RESISTOR,METAL FILM
105									6.04K 1% 1/8W
106									
107				1		OHMITE	RCR07G181JS	R3	RESISTOR,COMP
108									180Ω ¼W 5%
109									
110				2		BOURNS	3290W-1-202	R4,R14	RESISTOR VARIABLE
111									2K WW 25 TURN
112									
113				2		IRC	RN55C4021F	R5,R13	RESISTOR,METAL FILM
114									4.02K 1% 1/8W
115									
116				2		OHMITE	RCR07G222JS	R6,R18	RESISTOR,COMP
117									2.2K ¼W 5%
118									
119				2		OHMITE	RCR07G473JS	R7,R19	RESISTOR,COMP
120									47K ¼W 5%
121									
122				3		OHMITE	RCR07G102JS	R8,R11	RESISTOR COMP
123								R20	1K ¼W 5%
124									
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET OF 8 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126				2		IRC	BWH-1W-	R9,R21	RESISTOR,WIREWOUND
127							0.56Ω -5%		0.56Ω 1W 5%
128									
129				1		OHMITE	RCR07G122JS	R10	RESISTOR,COMP
130									1.2K ¼W 5%
131									
132				1		OHMITE	RCR42G100JS	R12	RESISTOR,COMP
133									10Ω 2W 5%
134									
135				1		BOURNS	3329P-1-500	R22	RESISTOR,VARIABLE
136									CERMET 50Ω
137									
138				1		IRC	RN55C3010F	R23	RESISTOR,METAL FILM
139									301Ω 1% 1/8W
140									
141				1		OHMITE	RCR07G471JS	R17	RESISTOR,COMP
142									470Ω ¼W 5%
143									
144									
145									
146									
147									
148									
149									
150									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107331	SHEET 8 OF 8 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
151									
152									
153									
154									
155									
156									
157									
158									
159				1		NATIONAL	LM301AH	U1	IC
160									
161				1		MOTOROLA	MC7815CP	U2	IC
162									
163				1		MOTOROLA	MC7915CP	U3	IC
164									
165				2		NATIONAL	LM323K	U5,U6	IC
166									
167				1		NATIONAL	LM308AH	U4	IC
168									
169									
170				1		LAMBDA	L-12-OV-5	Z1	OVERVOLTAGE
171									PROTECTOR
172									(CROWBAR)
173									
174									
175									

NOTES:

RE ION			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	2-16-77	

DASH NO.	NEXT ASSY APPLICATION	USED ON
-1	RC107320-1	504601

DRAWN BY: D. CARROLL

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL:

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

RECEIVER MANUAL TUNING
WW ASSEMBLY

SIZE	CODE IDENT	DWG NO.
A		PL 107321

CONTRACT NO.

SHEET 1 OF 5

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT PL 107321	SHEET 2 OF 5 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X					RCVR MANUAL TUNING ASSY
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25				1		STANDARD LOGIC	68-26-201H		WIRE WRAP BOARD

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107321	SHEET 3 OF 5 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				1		ERIE	831-000-X5F0-	C4	CAP,DIPPED MICA 100pf
27							101K		
28				1		ERIE	8111-050-651-222M	C18	CAP,CERAMIC 2200pf
29									
30				2		ERIE	5815-000-X5VD-104Z	C6,C7	CAP, TANT 1µf 25V
31									
32				2		SPRAGUE	TG-S10	C9,C10	CAP,DISC .01µf 100V
33									
34				1		ERIE	8121-050-651-472M	C11	CAP,CERAMIC 4700pf
35									
36				2		ERIE	831-000-X5F0-221K	C12,C13	CAP,DISC 220pf
37									
38				1		ERIE	8121-050-651-103M	C5	CAP,CERAMIC .01µf
39									
40									
41									
42									
43									
44									
45				1		IRC	RCR07G105JS	R1	RES,COMP 100K ¼W 5%
46									
47				1		IRC	RCR07G393JS	R2	RES,COMP 39K ¼W 5%
48									
49				2		IRC	RCR07G123JS	R3,R5	RES,COMP 12K ¼W 5%

PARTS LIST	GRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107321	SHEET 4 OF 5 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				3		IRC	RCR07G473JS	R4,R6,R8	RES,COMP 47K ¼W 5%
52									
53				1		IRC	RCR07G273JS	R7	RES,COMP 27K ¼W 5%
54									
55				2		IRC	RCR07G224JS	R9,R17	RES,COMP 220K ¼W 5%
56									
57				1		IRC	RCR07G472JS	R10	RES,COMP 4.7K ¼W 5%
58									
59				1		IRC	RCR07G102JS	R11	RES,COMP 1K ¼W 5%
60									
61				1		IRC	RCR07G474JS	R15	RES,COMP 470K ¼W 5%
62									
63				2		IRC	RCR07G220JS	R18,R19	RES,COMP 22Ω ¼W 5%
64									
65				1		IRC	RCR07G223JS	R27	RES,COMP 22K ¼W 5%
66									
67									
68									
69									
70									
71				1		NSC	MM74C195N	1-01	IC
72									
73				1		RCA	CD4030A	1-02	IC
74									
75				2		NSC	MM74C00N	1-03,2-03	IC

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107321	SHEET 3 OF 5 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
76				1		NATIONAL	SN74C08N	1-04	IC
77									
78				2		RCA	CD4029AE	1-05,1-05	IC
79									
80									
81									
82				2		NATIONAL	MM74C02N	2-01,2-02	IC
83									
84				1		NATIONAL	LM741CN	2-04	IC
85									
86				1		EXAR	XR2206	2-05	IC
87									
88									
89									
90									
91									
92									
93									
94									
95									
96									
97									
98									
99									
100									

RE ION

NOTES:

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	2/16/77	
B	REVISED	8/8/77	

DRAWN BY:
H. Short 12/7/76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL:

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

R1300 RECEIVER LOGIC

SIZE	CODE IDENT	DWG NO.
A		PL 107301

CONTRACT NO.

SHEET 1 OF 7.

DASH NO.	NEXT ASSY	USED ON
	APPLICATION	
-1	RD107300-1	504601

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107301	SHEET 2 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RD107300-1		WIRE WRAP ASSY
2			X						
3		X							
4	X								
5				REF		HRB-SINGER	RJ107302-1		SCHEMATIC DIAGRAM
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21				1*		STANDARD LOGIC	68-26-203		WIRE WRAP BOARD
22						*MODIFY AS FOLLOWS			
23						CUT THE FOLLOWING FROM PLANE		PIN 8 (1-3-3)(2-1-4)(1-3-2)(2-3-6)	
24								PIN 16 (1-3-3)(2-1-4)(2-2-6)(1-1-5)(1-3-1)	
25					*	ADD BERG PIN TO GND PLANE OR	P PATTERN		

PARTS LIST | .IRE SIN..ER, ...C RESTON, VIRGINIA | CO.....ACT NUMBER | CODE IDENT PL 107301 | SHEET 3 OF 7 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26									
27									
28				8		ECCO	H2723-04	(1-3-3)(2-1-6)	COMPONENT CARRIER
29								(2-2-6)(3-2-1)	
30								(2-1-3)(2-1-5)	
31								(1-2-2)(1-1-3)	
32				2		SPRAGUE	150D156X9020B	C2,C14	CAP 15uF 20V
33									
34				6		SPRAGUE			
35						(COMES WITH ITEM 21)	150D225X9020A	C1	CAP,2.2uF 20V
36									
37									
38				1		SPRAGUE	150D105X9035A	C16	CAP 1.0uF 35V
39									
40									
41									
42									
43									
44				1		SPRAGUE	150D107X9010R	C15	CAP 100uF 10V
45									
46				1		SPRAGUE	150D104X9035A	C17	CAP 0.1uf 35V
47									
48									
49									
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107301	SHEET 4 OF 7 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				3		MOTOROLA	1N4002	CR1,2,3	DIODE
52									
53				1		TRW	LVA51A	CR4	AVALANCHE ZENER
54									DIODE 5.1V
55				5		FAIRCHILD	1N270	CR5,6,7,14,15	DIODE
56									
57				6		MOTOROLA	1N4153	CR8-CR13	DIODE SIGNAL
58									
59				2		MOTOROLA	2N3904	Q2,Q3	TRANSISTOR
60									
61				2			RCR07G105JS	R22,R25	RES 1 MEG ¼W 5%
62									
63				3			RCR07G471JS	R32,R33,R34	RES,470Ω,¼W,5%
64									
65				1			RCR07G475JS	R21	RES 4.7 MEG ¼W 5%
66									
67				7			RCR07G472JS	R35-R41	RES 4.7K ¼W 5%
68									
69				1			RCR07G101JS	R23	RES 100 OHM ¼W 5%
70									
71				7			RCR07G102JS	R24,R26-R31,R42	RES 1K ¼W 5%
72									
73				1		NSC	MM74C02N	(3-1-1)	IC
74									
75				2		NSC	MM74C00N	(3-1-3) (3-1-2)	IC

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107301	SHEET 5 OF 7 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76									
77				1		TI	SN7427N	(1-2-3)	IC
78									
79				6		RCA	CD4050A	(2-1-1)(3-1-4)	IC
80								(3-1-5)(3-1-6)	
81								(2-2-5)(1-1-6)	
82									
83				1		NSC	DM74L04	2-1-2	IC
84									
85				7			LM75452	(3-2-6 TOP)(3-2-6 BOT)	IC
86								(3-4-6 TOP)(3-4-6 BOT)	
87								(3-4-5 TOP)(3-4-5 BOT)	
88								(3-3-6 TOP)	
89				1		NATL.	DM74L04N	(1-2-4)	IC
90									
91				1		NSC	MM74C83N	(2-1-4)	IC
92									
93				1		BECKMAN	898-3-R22K	(1-3-2)	RESISTOR NETWORK 22K
94									
95				4		SIGNETICS	N82S83B	(2-2-1)(2-2-2)	IC
96								(2-2-3)(2-2-4)	
97									
98				5		TI	SN74184N	(2-3-1)(2-3-2)	IC
99								(2-3-3)(2-3-4)	
100								(2-3-5)	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107301	SHEET 0 OF 7 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
101				7		NSC	DM8833N	(2-4-1)(2-4-2)	IC
102								(2-4-3)(2-4-4)	
103								(2-4-5)(2-4-6)	
104								(1-3-5)	
105									
106				3		BECKMAN	898-3-R1K	(3-2-2)(3-2-3)	RESISTOR NETWORK 1K
107								(3-2-4)	
108				1		BECKMAN	898-1-R1K	(2-3-6)	RESISTOR NETWORK 1K
109									
110				1		BECKMAN	898-3-R10K	(3-2-5)	RESISTOR NETWORK 10K
111									
112				1		FAIRCHILD	93L16DC	(1-3-6)	IC
113				7		NSC	MM74C192N	(3-3-1)(3-3-2)	IC
114								(3-3-3)(3-3-4)	
115								(3-3-5)(1-1-5)	
116								(1-3-1)	
117									
118				4		MOTOROLA	MC14585P	(3-4-1)(3-4-2)	IC
119								(3-4-3)(3-4-4)	
120									
121				1		FAIRCHILD	9368DC	(1-4-2)	
122									
123				1		TI	MM74C04N	(1-2-5)	IC
124									
125				1		TI	SN7445N	(1-4-1)	IC

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT PL 107301	SHEET 7 OF 7 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126				4		NSC	MM74C151N	(1-4-3)(1-4-4)	IC
127								(1-4-5)(1-4-6)	
128									
129				1		TI	SN7407N	(1-1-2)	IC
130									
131				2		NSC	MM74C906N	(1-1-1)(1-2-1)	IC
132									
133									
134									
135									
136									
137									
138									
139									
140									
141									
142									
143									
144									
145									
146									
147									
148									
149									
150									

NOTES:

RE ION

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	1-19-77	
B	REVISED	2-23-77	
C	ADDED: 2 FILISTER HD SCREW	3-25-77	
D	REVISED	9-9-77	x89

DRAWN BY:
RR 10-7-76

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL:
x Clifford 4/7/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

R1300 MOTHER BOARD PARTS LIST

SIZE	CODE IDENT	DWG NO.
A		PL 107311

CONTRACT NO.

SHEET 1 OF 7

DASH NO.	NEXT ASSY	USED ON
	APPLICATION	
-1	RD107310-1	50460102

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107311	SHEET 2 OF 7 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RD107310-1		ASSY
2									
3									
4									
5				REF		HRB-SINGER	RE107312-1		SCHEMATIC
6									
7									
8									
9				1		HRB-SINGER	RD107315-1		DETAIL
10									
11				AR		ALPHA	22 AWG		BUS WIRE
12				AR		ALPHA	#22		NYLON TUBING
13									
14				3		THERMALLOY	7717-43N		TRANS PAD
15									
16				1		AUGAT	8058-1G49	XU3	SOCKET 8 PIN
17									
18				2		AUGAT	514-AG10D	J10,XU4	SOCKET 14 PIN
19				REF		3M,SCOTCHFLEX	3406-1000	(MATE FOR J10)	
20				REF		3M,SCOTCHFLEX	3448-7	(CLIP FOR MATE FOR J10)	
21				2		AUGAT	516-AG10D	XU2,XU5	SOCKET 16PIN
22				4		AMP	60753-1	J2,J3,J4,J5	CONN SLIP ON
23				REF		AMP	1-332056-0	J2,J3,J4,J5 MATE	CONN SLIP ON
24				5		AMP	226023-1	J1,J6,J7,J8,J9	CONN RF
25				REF		AMP	51563-8	J1,J6,J7,J8,J9 MATE	CONN RF

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107311	SHEET 3 OF 7 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				10		DALE	ED52-16GF-101	A1-P1,P2	CONNECTOR
27								A2-P1,P2	
28								A3-P1,P2	
29								A4-P1,P2	
30								A5-P1,P2	
31									
32									
33									
34				1		3M,SCOTCHFLEX	3492-2002	J11	CONNECTOR
35				REF		3M,SCOTCHFLEX	3421-3000	(MATE FOR J11)	CONNECTOR
36									
37				2		H.H. SMITH	2-56 x 5/16		SCREW,FILISTER HD
38									2-56 x 5/16
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT PL 107311	SHEET 4 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				2		SPRAGUE	CS13BE107K	C1,C6	CAP,TANT,100uF,20V
52									
53				11		SPRAGUE	TG-S10	C2,C10-C16,	CAP,DISC,.01uF
54								C21-C23	
55									
56				5		SPRAGUE	CS13BE156K	C3,C5,C18-	CAP,TANT,15uF,
57								C20	20V.
58									
59				1		SPRAGUE	CS13BC396K	C4	CAP,TANT,39uF,
60									10V.
61									
62				2		ARCO	DM15-102J	C7,C17	CAP,DIPPED MICA,
63									1000 pF
64									
65				1		ERIE	5815-000	C8	CAP,.1uF,25V.
66							Y5V0-104Z		
67									
68				1		ERIE	5645-000-	C9	CAP,.33uF,25V.
69							Y5F0-334M		
70									
71				1		ARCO	DM15-300J	C24	CAP,DIPPED MICA,
72									30pF
73									
74									
75									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107311	SHEET 5 OF 7 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76				2		MOTOROLA	IN4737A	CR1,CR2	DIODE,ZENER,
77									7.5V.,1W.,5%
78									
79				3		MOTOROLA	2N3904	Q1,Q2,Q3	TRANSISTOR
80									
81									
82								R1	(NOT USED)
83									
84				1		IRC	RCR07G471JS	R2	RESISTOR,COMP,
85									470Ω,¼W,5%
86									
87				3		IRC	RCR07G101JS	R3,R32,R33	RESISTOR,COMP,
88									100Ω,¼W,5%
89									
90				1		IRC	RCR07G330JS	R4	RESISTOR,COMP,
91									33Ω,¼W,5%
92									
93				1		IRC	BWH-2W-	R5	RESISTOR,WIRE WOUND,
94							3.9Ω-5%		3.9Ω,2W,5%
95									
96									
97				3		IRC	RCR07G472JS	R6,R8,R10	RESISTOR,COMP,
98									4.7K,¼W,5%
99									
100									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107311	SHEET 6 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101				8		IRC	RCR07G102JS	R7,R9,R11,	RESISTOR,COMP
102								R15-R17,	1K,¼W,5%
103								R27,R29	
104									
105				3		IRC	RCR07G222JS	R12-R14	RESISTOR,COMP,
106									2.2K,¼W,5%
107									
108				1		IRC	RCR07G152JS	R18	RESISTOR,COMP
109									1.5K,¼W,5%
110									
111				1		IRC	RCR07G332JS	R19	RESISTOR,COMP
112									3.3K,¼W,5%
113									
114				1		IRC	RCR07G123JS	R20	RESISTOR,COMP,
115									12K,¼W,5%
116									
117				2		IRC	RCR07G470JS	R21,R22	RESISTOR,COMP
118									47Ω,¼W,5%
119									
120				5		IRC	RCR07G103JS	R23-R26,	RESISTOR,COMP
121								R28	10K,¼W,5%
122				1		IRC	RCR07G221JS	R30	RES,COMP,220Ω,¼W,5%
123				1		IRC	RCR07G104JS	R31	RESISTOR,COMP
124									100K,¼W,5%
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107311	SHEET 1 OF 7 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
126				1		FAIRCHILD	uA706BPC	U1	IC
127									
128				2		RCA	CD4053BE	U2,U5	IC
129									
130				1		NATIONAL	LM301AH	U3	IC
131									
132				1		NATIONAL	MM74C906N	U4	IC
133									
134									
135				1		MINI-CIRCUITS LAB	PSC-3-1	Z1	3-WAY POWER DIVIDER
136									
137									
138									
139									
140									
141									
142									
143									
144									
145									
146									
147									
148									
149									
150									

NOTES:

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	10/7/75	[signature]

DRAWN BY: R. REPPLIER	HRB-SINGER, INC. RESTON, VA., USA	
CHECKED BY:	PRE-D IF PC ASSY	
CONTRACTOR CERTIFICATION:		
DESIGN APPROVAL: Richard J Rosica	SIZE A	CODE IDENT	DWG NO. PL 105998
DOCUMENTATION APPROVAL:		CONTRACT NO.	SHEET 1 OF 9

DASH NO	NEXT ASSY	USED ON
	APPLICATION	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 2 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC105998-1		ASSY
2									
3									
4									
5				1		HRB-SINGER	RC105997-1		DETAIL
6									
7				REF		HRB-SINGER	RD105995-1		SCHEMATIC
8									
9									
10									
11				1		HRB-SINGER	RC105213-13	L9	LC NETWORK
12				1		HRB-SINGER	RC105213-11	L2	LC NETWORK
13				1		HRB-SINGER	RC105213-12	L10	LC NETWORK
14				1		HRB-SINGER	RC105213-6	L1	LC NETWORK
15				1		HRB-SINGER	RC105213-7	L3	LC NETWORK
16									
17									
18									
19				5		THERMALLOY CO	7717-43N		TRAN PAD
20									
21				5		THERMALLOY CO.	7717-107N		I.C. PAD
22									
23				1		SEALECTRO	226-4017-00-0-200	TP1	TEST POINT
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 3 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26				7		SPRAGUE	CS13BE156K	C1,C20,C28,C33	CAPACITOR,TANT,15uF,20V
27								C35,C36,C37	
28				1		ARCO	DM15-102J	C54	CAP,DIPPED MICA,1000pF
29									
30				2		ARCO	DM15-151J	C2,C11	CAP,DIPPED,MICA,150pF
31									
32									
33									
34									
35									
36									
37				2		ARCO	DM15-070J	C5,C8	CAP,DIPPED,MICA,6pF
38				1		ERIE	8121-100 COGO	C32	CAP,CERAMIC,33pF,10%
39							330K		
40									
41									
42									
43									
44				13		SPRAGUE	TG-S10	C12,C13,C15,C16	CAP,DISC,.01uF,100V
45								C17,C55,C22,C24,	
46								C56,C31,C44,C45	
47								C53	
48									
49									
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL105998	SHEET 4 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				2		ARCO	DM5CC200J	C14,C23	CAP,DIPPED,MICA,20pF,5%
52									
53									
54									
55				4		SPRAGUE	CS13BF105K	C29,C30,C41,C42	CAP,TANT,1uF,35V
56									
57									
58									
59									
60				1		ARCO	DM15-030D	C49	CAP,DIPPED,MICA,3pF,±5%
61									
62				1		ARCO	DM15-471J	C43	CAP,DIPPED,MICA,470pF
63									
64				3		ARCO	DM15-221J	C34,C46,C52	CAP,DIPPED,MICA,220pF,5%
65									
66				3		H-P	5082-3039	CR1,CR4,CR3	DIODE,PIN
67									
68									
69				7		AERTECH	A2S800	CR5,CR6,CR12,	DIODE,SCHOTTKY
70								CR14,CR15,CR17	
71								CR16	
72									
73				1		MOTOROLA	1N4738A	CR7	DIODE,ZENER
74									
75									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 5 OF 9 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76				2		G.E.	1N4157	CR8,CR18	DIODE
77									
78				2		FAIRCHILD	1N4153	CR9,CR10	DIODE,SIGNAL
79									
80				1		FAIRCHILD	1N270	CR11	DIODE,SIGNAL
81									
82				1					
83									
84									
85									
86									
87									
88									
89									
90				4		LENOX-FUGLE	NR-8.2	L4,L5,L6,L8	COIL,8.2uH
91									
92									
93				6		IRC	RCR07G470JS	R1,R2,R27,R28, R45,R46	RESISTOR,CARBON,COMP, 47Ω,¼W,5%
94									
95									
96									
97				2		IRC	RCR07G150JS	R3,R58	RESISTOR,CARBON,COMP, 15Ω,¼W,5%
98									
99				2		IRC	RCR07G151JS	R62,R36	RES.,150Ω,¼W,5%
100				2		IRC	RCR07G680JS	R63,R52	RES.,68Ω,¼W,5%

PARTS LIST	GRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 6 OF 9 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101				1		IRC	RCR07G153JS	R4	RESISTOR,CARBON COMP,
102									15K,¼W,5%
103				1		IRC	RCR07G123JS	R30	RES.,12K,¼W,5%
104				6		IRC	RCR07G102JS	R5,R6,R57	RESISTOR,CARBON
105								R32,R42,R43	COMP,1K,¼W,5%
106									
107				5		IRC	RCR07G104JS	R9,R17,R18,R50,	RESISTOR,CARBON,COMP,
108								R51	100K,¼W,5%
109									
110				9		IRC	RCR07G101JS	R8,R10,R56,R19,	RESISTOR,CARBON COMP,
111								R21,R11,R22,R23,	100Ω,¼W,5%
112								R64	
113									
114				4		IRC	RCR07G473JS	R37,R44,R47,R60	RESISTOR,CARBON COMP,
115									47K,¼W,5%
116									
117									
118									
119									
120									
121				3		IRC	RCR07G471JS	R16,R48,R49	RESISTOR,CARBON COMP,
122									470Ω ,¼W,5%
123									
124									
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 7 OF 9 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126				1		IRC	RCR07G181JS	R20	RESISTOR,CARBON COMP,
127									180Ω,¼W,5%
128									
129				1		IRC	RCR07G273JS	R24	RESISTOR,CARBON COMP,
130									27K,¼W,5%
131									
132				3		IRC	RCR07G103JS	R25,R29,R35	RESISTOR,CARBON COMP,
133									10K,¼W,5%
134									
135				3		IRC	RCR07G223JS	R26,R54,R55	RESISTOR,CARBON COMP,
136									22K,¼W,5%
137									
138				1		IRC	RCR07G222JS	R59	RES.,2.2K,¼W,5%
139									
140									
141				1		IRC	RCR07G105JS	R33	RESISTOR,CARBON COMP,
142									1 MEG,¼W,5%
143									
144									
145									
146				1		IRC	RCR07G510JS	R38	RESISTOR,CARBON COMP,
147									51Ω,¼W,5%
148									
149				1		IRC	RCR07G2R7JS	R39	RESISTOR,CARBON COMP,
150									2.7Ω,¼W,5%

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 8 OF 9 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151				1		IRC	RCR07G182JS	R40	RESISTOR,CARBON COMP,
152									1.8K,¼W,5%
153									
154									
155									
156									
157				1		BOURNS	3329P-1-101	R53	RESISTOR,VARIABLE,
158									CERMET,100Ω
159				1		BOURNS	3329P-1-104	R61	RESISTOR,VARIABLE,100K
160				1		RCA	2N5179	Q1	TRANSISTOR
161									
162									
163				1		MOTOROLA	2N5266	Q2	TRANSISTOR
164									
165									
166				1		FAIRCHILD	2N3638	Q3	TRANSISTOR
167									
168									
169				1		MOTOROLA	2N708	Q4	TRANSISTOR
170				1		MOTOROLA	2N3906	Q5	TRANSISTOR
171									
172				2		MOTOROLA	MC1590G	U1,U3	INTEGRATED CIRCUIT
173									
174									
175									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105998	SHEET 9 OF 9 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
176				1		NATIONAL SEMI-CONDUCTOR	LH0002CH	U4	INTEGRATED CIRCUIT
177									
178									
179				1		NATIONAL SEMI-CONDUCTOR	LM301AH	U5	INTEGRATED CIRCUIT
180									
181									
182				1		RCA	CA3100T	U6	INTEGRATED CIRCUIT
183									
184									
185									
186									
187									
188									
189									
190									
191									
192									
193									
194									
195									
196									
197									
198									
199									
200									

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105202	REVISION LTR F DATE 3-25-77
LIST TITLE IF PRE-SELECTOR , PC ASSY		ASSY DWG REV LTR	AUTHENTICATION K L Orford	REV AUTH NO.	SHEET 1 OF 3 SHEETS

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
1	-				C	RC105202	RC105202-1	IF PRE-SELECTOR, PC ASSY
5	1				C	RC105201	RC105201-1	PRINTED CIRCUIT DETAIL
7	REF				E	RE105198	RE105198-1	SCHEMATIC DIAGRAM
11	16				C	RC105213	RC105213-2	L11-L13, L17-L19, L21-L27, L30-L32, LC NETWORK
12	2				C	RC105213	RC105213-4	L10, L16, LC NETWORK
14	2				C	RC105213	RC105213-5	L14, L20, LC NETWORK
15	1				C	RC105213	RC105213-9	L28, LC NETWORK
16	1				C	RC105213	RC105213-10	L34, LC NETWORK
17	1					LENOX-FUGLE	NR-0.47	L15, INDUCTOR, 0.47μH
18	2				C	RC105213	RC105213-8	L29,L33, LC NETWORK
20	3					THERMALLOY CO.	7717-43N	TRANSISTOR PAD
22	1					THERMALLOY CO.	7717-15N	TRANSISTOR PAD
26	11					SPRAGUE	TGS-10	C1-C7, C39,C40,C63,C86, CAPACITOR, .01μf, CERAMIC, 100V
29.	2					CENTRE ENG	200-100-NPO-221J	C81,C82, CAPACITOR, MICA, 220pf
38	4					CENTRE ENG	200-100-NPO-681J	C20,C21,C37,C38, CAPACITOR, MICA, 680pf
41	2					CENTER ENG	200-100-NPO-621J	C22,C36, CAPACITOR, MICA, 620pf

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A	CONTRACT NO	CODE IDENT 99592	PL 105202	REVISION LTR DATE

LIST TITLE	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO.	SHEET 2 OF 3 SHEETS
IF PRE-SELECTOR, PC ASSY				

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
43	2					CENTRE ENG	200-100-NPO-821J	C23,C35, CAPACITOR, MICA, 820pf
45	4					CENTRE ENG	200-100-NPO-181J	C41,C62,C64,C85, CAPACITOR, MICA 180pf
	1					CENTRE ENG	200-100-NPO-221J	C88, CAP, MICA, 220pF
	1					CENTRE ENG	200-100-NPO-271J	C89, CAP, MICA, 270pF
49	4					CENTRE ENG	200-100-NPO-391J	C57,C58,C59,C60,CAPACITOR, MICA 390pf
51	4					CENTRE ENG	200-100-NPO-331J	C56,C61,C80,C83,CAPACITOR, MICA, 330pf, 5%
57	2					CENTRE ENG	100-100-NPO-569D	C79,C84, CAPACITOR, CERAMIC, 5.6pf, ±.5pf
63	1					SPRAGUE	CS13BF105K	C87, CAPACITOR, TANT,1µf, 35V
76	12					MOTOROLA	1N914	CR1-CR6, CR8-CR13, DIODE
78	1					MOTOROLA	1N459A	CR7, DIODE
80	8					LENNOX FUGLE	NR-8.2	L1-L4,L6-L9, INDUCTOR, 8.2µh
85	1					RCA	41039	Q1, TRANSISTOR
87	3					MOTOROLA	2N3906	Q2-Q4, TRANSISTOR
90	7					OHMITE	RCR07G470JS	R1,R3,R5,R13,R15,R17,R11, RES , 47 OHM, 1/4 W, 5%
93	6					OHMITE	RCR20G102JS	R2,R4,R6,R12,R14,R16, RESISTOR, 1K, 1/2 W, 5%

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK. STATE COLLEGE. PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105202	REVISION LTR DATE
LIST TITLE: IF PRE-SELECTOR, PC ASSY	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO.	SHEET 3 OF 3 SHEETS	

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
96	4					OHMITE	RCR07G103JS	R7,R20,R23,R26, RESISTOR, 10K,1/4 W, 5%
98	1					OHMITE	RCR07G102JS	R8, RESISTOR, 1K, 1/4 W, 5%
100	2					OHMITE	RCR07G471JS	R28,R31, RESISTOR, 470 OHM, 1/4 W, 5%
101	1					OHMITE	RCR07G082JS	R10, RESISTOR,8.2 OHM, 1/4 W, 5%
103								
105	3					OHMITE	RCR07G222JS	R18,R21,R24, RESISTOR, 2.2K, 1/4 W, 5%
107	3					OHMITE	RCR20G392JS	R19,R22,R25, RESISTOR, 3.9K, 1/2 W, 5%
109	2					OHMITE	RCR07G561JS	R29,R30, RESISTOR, 560 OHM, 1/4 W,5%
110	2					OHMITE	RCR07G822JS	R27,R32, RESISTOR, 8.2K, 1/4 W, 5%
111	2					OHMITE	RCR07G330JS	R33,R34, RESISTOR, 33 OHM, 1/4 W, 5%
112	1					OHMITE	RCR07G271JS	R9, RESISTOR, 270 OHM, 1/4 W, 5%
113	2					BOURNS	3329P-1-100	R36, R37, RESISTOR VARIABLE 10Ω
114	1					BOURNS	3329W-1-501	R35, RESISTOR VARIABLE, 500Ω
115								

NOTES:

EV ONS

LTR	DESCRIPTION	DATE	APPROVED
C	REVISION	3/25/77	KLG

-1	RE107200-2	5046
DASH NO	NEXT ASSY	USED ON
	APPLICATION	

DRAWN BY: R.R.E. 9/12/77

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: K L Alford

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

IF PRE SELECTOR FILTERS
(PC ASSY)

SIZE	CODE IDENT	DWG NO.
A		PL 105857

CONTRACT NO.

SHEET 1 OF 4

PARTS LIST | HRB-SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 105857 | SHEET 2 OF 4 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC105857-1		ASSY
2									
3									
4									
5				1		HRB-SINGER	RC105856-1		PC DETAIL
6									
7									
8									
9				REF		HRB-SINGER	RE105853-1		SCHEMATIC
10									
11									
12									
13				3		THERMALLOY CO.	7717-43N		TRANS. PAD
14									
15									
16									
17									
18									
19				1		CIRQTEL INC.	1942-001-858	FL1	FILTER
20									
21									
22									
23									
24									
25									

PARTS LIST	HRB SINGER, Inc RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT PL 105857	SHEET 3 OF 4 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				10		HRB-SINGER	RC105213-2	L21-L27	LC NETWORK
27								L30-L32	
28				1		HRB-SINGER	RC105213-9	L28	LC NETWORK
29				2		HRB-SINGER	RC105213-8	L29-L33	LC NETWORK
30				1		HRB-SINGER	RC105213-10	L34	LC NETWORK
31				8		LENOX FUGLE	NR-8.2	L1-L4,L6-L9	INDUCTOR 8.2uh
32									
33									
34				9		SPRAGUE	TGS-10	C1-C4,C39,C40,	CAP., CERAMIC
35								C63	.01uf,100V
36								C86,C88	
37				4		CENTRE ENG	200-100-NPO-	C41,C62	CAP., MICA
38							181J	C64,C85	180pf
39				4		CENTRE ENG	200-100-NPO-	C56,C61	CAP,MICA
40							331J	C80,C83	330pf, 5%
41				4		CENTRE ENG	200-100-NPO-391J	C57,C58,C59,C60	CAP,MICA,390pf
42									
43				2		CENTRE ENG	100-100-NPO-569D	C79,C84	CAP,CERAMIC 5.6pf,+.5pf
44									
45				2		CENTRE ENG	200-100-NPO-221J	C81,C82	CAP,MICA,220pf
46									
47									
48									
49				12		MOTOROLA	1N914	CR1-CR6	DIODE
50								CR8-CR13	

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105857	SHEET 4 OF 4 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
51				3		MOTOROLA	2N3906	Q2,Q3,Q4	TRANSISTOR
52									
53									
54				6			RCR07G470JS	R1,R3,R5,R13,	RES.
55								R15,R17	47Ω,¼W,5%
56				6			RCR20G102JS	R2,R4,R6,R12,	RES.
57								R14,R16	1K,½W,5%
58				3			RCR07G222JS	R18,R21,R24	RES.
59									2.2K,¼W,5%
60				3			RCR20G392JS	R19,R22,R25	RES.
61									3.9K,½W,5%
62				3			RCR07G103JS	R20,R23,R26	RES.
63									10K,¼W,5%
64				2			RCR07G822JS	R27,R32	RES.
65									8.2K,¼W,5%
66				2			RCR07G471JS	R28,R31	RES.
67									470Ω,¼W,5%
68				2			RCR07G561JS	R29,R30	RES.
69									560Ω,¼W,5%
70				2			RCR07G330JS	R33,R34	RES.
71									33Ω,¼W,5%
72				2			RCR07G121JS	R35,R36	RES.
73									120Ω,¼W,5%
74				1			RCR07G510JS	R37	RES.
75									51Ω,¼W,5%

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A.	CONTRACT NO	CODE IDENT 99592	PL 105197	REVISION LTR E DATE 6-21-74
LIST TITLE: P C ASSY, 21.4 MHZ IF AMPLIFIER	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO MKS TYPED 5-6-75	SHEET 1 OF 5 SHEETS	

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
1	-				C	RC105197	RC105197-1	P C ASSY, 21.4 MHZ IF AMPLIFIER
5	1				C	RC105196	RC105196-1	DETAIL
7	REF				E	RE105193	RE105193-1	SCHEMATIC DIAGRAM
11	2				C	RC105213	RC105213-1	L13,L20, LC NETWORK
12	2				C	RC105213	RC105213-2	L16,L17, LC NETWORK
13	2				C	RC105213	RC105213-3	L12,L21, LC NETWORK
19	10					THERMALLOY CO	7717-43N	TRANSISTOR PAD
21	6					THERMALLOY CO	7717-107N	INTEGRATED CIRCUIT PAD
26	23					SPRAGUE	TG-S10	C1,C5,C6,C7,C8,C11,C12,C15,C16,C17, C18,C22,C23,C27,C29,C32,C39,C47,C48, C56,C57,C65,C66 CAPACITOR, DISC, .01µf, 100V
33	6					ERIE	8101-050-651-102 M	C2,C20,C25,C33,C35,C37, CAPACITOR, CERAMIC, 1000pf, 50V
35	1					ARCO	DM15-102J	C69, CAPACITOR, MICA, 1000pf
36	2					SPRAGUE	CS13BF105K	C3,C4, CAPACITOR, TANT, 1µf, 35V
38	2					ERIE	8121-100-COGO -470K	C9,C10, CAPACITOR, CERAMIC, 47pf,10%
39	3					ARCO	DM5CC100J	C14,C19,C24, CAPACITOR, DIPPED MICA 10pf, 5%

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK. STATE COLLEGE. PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105197	REVISION LTR E DATE 6-21-74
LIST TITLE P.C. ASSY, 21-4 MHZ IF AMPLIFIER		ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO. DKS TYPED 5-6-75	SHEET 2 OF 5 SHEETS

ITEM OR FIND NUMBER	-1 QTY RQD	QTY RQD	QTY RQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
42	1					ERIE	8121-100-COGO -220K	C13, CAPACITOR, CERAMIC, 22pf, 10%
45	5					ARCO	DM5FY101	C21,C26,C34,C36,C38, CAPACITOR, DIPPED MICA, 100pf
48	3					SPRAGUE	CS13BE156K	C28,C67,C68, CAPACITOR, TANT, 15µf, 20V
51	2					ERIE	8101-100-W5RO-151K	C30,C31, CAPACITOR, CERAMIC, 150pf, 10%
62	1					ARCO	DM19 -132J	C43, CAPACITOR, DIPPED MICA, 1300pf, 5%
67	2					ARCO	DM15 -181J	C49,C55, CAPACITOR, DIPPED MICA, 180pf, 5%
73	1					ARCO	DM15-331J	C52, CAPACITOR, DIPPED MICA, 330pf, 5%
76	2					ARCO	DM15-201J	C58,C64, CAPACITOR, DIPPED MICA, 200pf, 5%
81	3					H-P	5082-3039	CR1,CR2,CR4, DIODE,PIN
84	7					AERTECH	A2S800	CR5,CR6,CR7,CR8,CR9,CR10,CR11, DIODE, SCHOTTKY
89	12					MOTOROLA	1N914	CR12,CR13,CR14,CR15,CR16,CR17,CR18, CR19,CR20,CR21,CR22,CR23, DIODE, SIGNAL

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105197	REVISION LTR E DATE 6-21-74
LIST TITLE P. C. ASSY, 21.4 MHZ IF AMPLIFIER	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO TYPED 5-6-75		SHEET 3 OF 5 SHEETS

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
96	15					LENNOX FUGLE	NR-8.2	L1,L2,L4,L5,L6,L8,L9,L10,L11,L14,L15, L18,L19,L22,L23, INDUCTOR, 8.2µh
101	1					LENNOX FUGLE	NR-1.8	L3, INDUCTOR, 1.8µh
103	1					LENNOX FUGLE	NR- .56	L7, INDUCTOR, .56µh
112	1					RCA	2N5179	Q1, TRANSISTOR
114	9					MOTOROLA	2N3906	Q2,Q3,Q4,Q5,Q6,Q7,Q8,Q9,Q10, TRANSISTOR
118	9					IRC	RCR07G470JS	R1,R2,R60,R62,R64,R67,R69,R71,R8, RESISTOR, CARBON COMP, 47 OHM, 1/4 W, 5%
122	19					IRC	RCR07G101JS	R3,R4,R7,R12,R18,R19,R26,R29,R30,R38, R39,R43,R46,R47,R49,R81,R83,R85,R87, RESISTOR, CARBON COMP,100 OHM,1/4 W, 5%
129	1					IRC	RCR07G273JS	R5, RESISTOR,CARBON COMP, 27K,1/4 W, 5%
132	4					IRC	RCR07G103JS	R6,R74,R77,R80, RESISTOR, CARBON COMP, 10K, 1/4 W, 5%
135	1					IRC	RCR07G100JS	R10, RESISTOR, CARBON COMP, 10 OHM, 1/4 W, 5%
138	1					BOURNS	3329P-1-500	R9, RESISTOR, VARIABLE, CERMET,500HM

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105197	REVISION LTR E DATE 6-21-74
LIST TITLE P.C. ASSY, 21.4 MHZ IF AMPLIFIER	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO DHS TYPED 5-6-75		SHEET 4 OF 5 SHEETS

ITEM OR FIND NUMBER	-1 QTY REQD	QTY REQD	QTY REQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
144	1					BOURNS	3329P-1-501	R11, RESISTOR, VARIABLE, CERMET, 500 OHM
147	1					IRC	RCR07G150JS	R13, RESISTOR, CARBON COMP,15 OHM, 1/4 W, 5%
151	1					IRC	RCR07G153JS	R14, RESISTOR, CARBON COMP, 15K, 1/4W, 5%
154	3					IRC	RCR07G681JS	R15,R23,R48, RESISTOR, CARBON COMP, 680 OHM, 1/4 W, 5%
157	12					IRC	RCR07G104JS	R16, R22,R24,R32,R35,R40,R41,R45,R52, R55,R58,R84, RESISTOR,CARBON COMP, 100K, 1/4 W, 5%
162	6					IRC	RCR07G471JS	R17,R25,R27,R31,R36,R82, RESISTOR, CARBON COMP, 470 OHM, 1/4 W,5%
165	3					IRC	RCR07G102JS	R20,R21,R86,RES, CARBON COMP, 1K, 1/4 W,5%
168	2					BOURNS	3329P-1-101	R28,R37, RESISTOR, VARIABLE, CERMET, 100 OHM
171	5					IRC	RCR07G332JS	R33,R42,R51,R54,R57, RESISTOR, CARBON COMP, 3.3K, 1/4 W, 5%
174	5					IRC	RCR07G682JS	R34,R44,R53,R56, R59, RESISTOR, CARBON COMP, 6.8K, 1/4 W, 5%

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A.	CONTRACT NO.	CODE IDENT 99592	PL 105197	REVISION LTR E DATE 6-21-74
LIST TITLE: P.C. ASSY, 21.4 MHZ IF AMPLIFIER	ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO DHT TYPED 5-6-75	SHEET 5 OF 5 SHEETS	

ITEM OR FIND NUMBER	-1 QTY REQ	QTY REQ	QTY REQ	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
177								
179	1					IRC	RCR07G221JS	R88, RESISTOR, 220 OHM, 1/4 W, 5%
182	1					IRC	RCR20G101JS	R50, RESISTOR, CARBON COMP, 100 OHM, 1/2 W, 5%
185	6					IRC	RCR20G102JS	R61,R63,R65,R66,R68,R70, RESISTOR, CARBON COMP, 1K, 1/2 W, 5%
188	3					IRC	RCR20G392JS	R72,R75,R78, RESISTOR, CARBON COMP, 3.9K, 1/2 W, 5%
191	3					IRC	RCR07G222JS	R73,R76,R79, RESISTOR, CARBON COMP, 2.2K, 1/4 W, 5%
195	1					NATIONAL SEMI-CONDUCTOR	LH0002CH	U1, INTEGRATED CIRCUIT
197	5					MOTOROLA	MC1590G	U2 - U6, INTEGRATED CIRCUIT

NOTES:

LTR	DESCRIPTION	DATE	APPROVED

DRAWN BY: R. REPPLIER	HRB-SINGER, INC. RESTON, VA., USA	
CHECKED BY:	21.4 MHz IF AMP. PC ASSY	
CONTRACTOR CERTIFICATION:		
DESIGN APPROVAL: K L Alford	SIZE A / CODE IDENT / DWG NO. PL 105935	
DOCUMENTATION APPROVAL:	CONTRACT NO.	SHEET 1 OF 9

CASH NO.	NEXT ASSY	USED ON

APPLICATION

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 2 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RC105935-1		ASSY
2									
3									
4									
5				1		HRB-SINGER	RC105196-1		DETAIL
6									
7				REF		HRB-SINGER	RE105934-1		SCHEMATIC
8									
9									
10									
11				1		HRB-SINGER	RC105213-1	L16	LC NETWORK
12				2		HRB-SINGER	RC105213-2	L12,L13	LC NETWORK
13				1		HRB-SINGER	RC105213-3	L17	LC NETWORK
14				1		HRB-SINGER	RC105994-1	L21	LC NETWORK
15				1		HRB-SINGER	RC105-994-2	L20	LC NETWORK
16									
17									
18									
19				10		THERMALLOY CO.	7717-43N		TRAN PAD
20									
21				6		THERMALLOY CO.	7717-107N		I.C. PAD
22									
23									
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				23		SPRAGUE	TG-S10	C1,C5,C6,C7,	CAP,DISC,.01uF,100V.
27								C8,C11,C12,C15	
28								C16,C17,C18,C22	
29								C23,C27,C29,C32,	
30								C39,C47,C48,C56,	
31								C57,C65,C66	
32									
33				6		ERIE	8101-050-651-102M	C2,C20,C25,C33,	CAP,CERAMIC,1000pF
34								C35,C37	50V.
35				1		ARCO	DM15-102J	C69	CAP,MICA,1000pF
36				2		SPRAGUE	CS13BF105K	C3,C4	CAP,TANT,1uF,35V
37									
38				2		ERIE	8121-100-C0G0-470K	C9,C10	CAP,CERAMIC,47pF,10%
39				2		ARCO	DM5CC100J	C19,C24	CAP,DIPPED MICA,10pF,5%
40									
41				1		CE	200-100-NP0-390J	C14	CAP,39pF
42				1		ERIE	8121-100-C0G0	C13	CAP,CERAMIC,4pF,10%
43									
44									
45				5		ARCO	DM5FY101	C21,C26,C34,C36	CAP,DIPPED MICA, 100pF
46								C38	
47									
48				3		SPRAGUE	CS13BE156K	C28,C67,C68	CAP,TANT,15uF,20V.
49									
50									

PARTS LIST	GRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 4 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				2		ERIE	8101-100-W5R0-151K	C30,C31	CAP,CERAMIC,150pF,10%
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62				1		ARCO	DM-19-331J	C43	CAP,DIPPED MICA,1300pF
63									5%
64									
65									
66									
67				2		ARCO	DM-15-181J	C70,C71	CAP,DIPPED MICA,180pF,5%
68									
69									
70				1		ARCO	CD7FC221J03	C72	CAP,220pF
71									
72									
73									
74									
75									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 5 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76				2		ARCO	DM15-201J	C49,C55	CAP,DIPPED MICA,200pF,5%
77									
78									
79				2		ARCO	DM15-	C58,C64	CAP,DIPPED MICA, pF,5%
80									
81				3		H-P	5082-3039	CR1,CR2,CR4	DIODE,PIN
82									
83									
84				7		AERTECH	A2S800	CR5,CR6,CR7,CR8,	DIODE,SCHOTTKY
85								CR9,CR10,CR11	
86									
87									
88									
89				12			1N914	CR12,CR13,CR14,	DIODE,SIGNAL
90								CR15,CR16,CR17,	
91								CR18,CR19,CR20,	
92								CR21,CR22,CR23	
93									
94									
95									
96				15		LENOX-FUGLE	NR-8.2	L1,L2,L4,L5,	INDUCTOR,8.2nH
97								L6,L8,L9,L10,L11,	
98								L14,L15,L18,L19	
99								L22,L23	
100									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 6 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101				1		LENOX-FUGLE	NR-3.9	L3	INDUCTOR,3.9uH
102									
103				1		LENOX-FUGLE	NR-.56	L7	INDUCTOR,.56uH
104									
105									
106									
107									
108									
109									
110									
111									
112				1		RCA	2N5179	Q1	TRANSISTOR
113									
114				9		MOTOROLA	2N3906	Q2,Q3,A4,Q5,Q6,	TRANSISTOR
115								Q7,Q8,Q9,Q10	
116									
117									
118				9		IRC	RCR07G470JS	R1,R2,R60,R62	RESISTOR,CARBON COMP,
119								R64,R67,R69,R71	47Ω,¼W,5%
120								R8	
121									
122				19		IRC	RCR07G101JS	R3,R4,R7,R12,R18	RESISTOR,CARBON COMP,
123								R19,R26,R29,R30,	100Ω,¼W,5%
124								R38,R39,R43,R46,	
125								R47,R49,R81,R83,	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 1 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126								R85,R87	
127									
128									
129					1	IRC	RCR07G273JS	R5	RESISTOR,CARBON COMP,
130									27K,¼W,5%
131									
132					4		RCR07G103JS	R6,R74,R77,R80	RESISTOR,CARBON COMP
133									10K,¼W,5%
134									
135					1	IRC	RCR07G100JS	R10	RESISTOR,CARBON COMP,
136									10Ω,¼W,5%
137									
138					1	BOURNS	3329P-1-500	R9	RESISTOR,VARIABLE,
139									CERMET,50Ω
140									
141									
142									
143									
144					1	BOURNS	3329P-1-501	R11	RESISTOR,VARIABLE,
145									CERMET,500Ω
146									
147					1	IRC	RCR07G150JS	R13	RESISTOR,CARBON COMP,
148									15Ω,¼W,5%
149									
150									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 8 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151				1		IRC	RCR07G153JS	R14	RESISTOR,CARBON COMP,
152									15K,¼W,5%
153									
154				3		IRC	RCR07G681JS	R15,R23,R48	RESISTOR,CARBON COMP,
155									68Ω,¼W,5%
156									
157				12		IRC	RCR07G104JS	R16,R22,R24,R32,	RESISTOR,CARBON COMP,
158								R35,R40,R41,R45,	100K,¼W,5%
159								R52,R55,R58,R84	
160									
161									
162				6		IRC	RCR07G471JS	R17,R25,R27,	RESISTOR,CARBON COMP,
163								R31,R36,R82	470Ω,¼W,5%
164									
165				2		IRC	RCR07G102JS	R20,R21	RESISTOR,CARBON COMP,
166									1K,¼W,5%
167									
168				2		BOURNS	3329P-1-101	R28,R37	RESISTOR,VARIABLE,
169									CERMET,100Ω
170									
171				5		IRC	RCR07G332JS	R33,R42,R51,R54,	RESISTOR,CARBON COMP,
172								R57	3.3K,¼W,5%
173									
174				5		IRC	RCR07G682JS	R34,R44,R53,R56,	RESISTOR,CARBON COMP,
175								R59	6.8K,¼W,5%

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105935	SHEET 9 OF 9 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
176									
177				1		IRC	RCR07G102JS	R86	RESISTOR 1.0K ¼W 5%
178									
179				1		IRC	RCR07G221JS	R88	RESISTOR,220Ω ¼W 5%
180									
181									
182				1		IRC	RCR20G101JS	R50	RESISTOR,CARBON COMP
183									100Ω,½W,5%
184									
185				6		IRC	RCR20G102JS	R61,R63,R65,R66,	RESISTOR,CARBON COMP,
186								R68,R70	1K,½W,5%
187									
188				3		IRC	RCR20G392JS	R72,R75,R78	RESISTOR,CARBON COMP,
189									3.9K,½W,5%
190									
191				3		IRC	RCR07G222JS	R73,R76,R79	RESISTOR,CARBON COMP,
192									2.2K,¼W,5%
193									
194									
195				1		NATIONAL SEMICOND.	LH0002CH	U1	I.C.
196									
197				5		MOTOROLA	MC1590G	U2,U3,U4,U5,U6	I.C.
198									
199									
200									

NOTES:

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED ADDED - 2	11-9-76	
B	REVISED	3-25-77	

-1	RC107260	50460102
DASH	NEXT ASSY	USED ON
	APPLICATION	

DRAWN BY: D. Carroll

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: 4/1/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

VIDEO FILTERS PARTS LIST

SIZE	CODE IDENT	DWG NO.
A		PL 107261

CONTRACT NO.

SHEET 1 OF 8

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	SHEET 2 OF 8 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RC107260-1		ASSY.
2			X				RC107260-2		ASSY.
3									
4									
5									
6									
7									
8									
9				REF		HRB-SINGER	RD107262-1		SCHEMATIC
10			REF				RD107262-2		SCHEMATIC
11									
12			1	1		HRB-SINGER	RC107265-1		P.C. DETAIL
13									
14									
15									
16			3	3		THERMALLOY CO.	7717-43N		TRANS PAD
17									
18			2	2		AUGAT	516-AG10D		I.C. SOCKET 16 PIN
19									
20			4	4		AUGAT	8058-1G49		I.C. SOCKET 8 PIN
21									
22			AR	AR		QQ-S-571P	SN60WRMA-P2		SOLDER
23									
24									
25									

PARTS LIST	..RE SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	SHEET 3 OF 8 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26			10	10		SPRAGUE	CS13BF105K	C1-C4,C20-C23	CAP, TANT 1uf
27								C26,C27	35V
28									
29				1		ARCO	DM15-102J	C5	CAP, MICA, 1000 pF, 5%
30			1			ARCO	DM15-391J		CAP, ICA, 390 pF, 5%
31									
32									
33				1		ARCO	DM15-391J	C6	CAP, MICA, 390 pF, 5%
34			1			ARCO	DM15-201J		CAP, MICA, 200 pF, 5%
35									
36									
37				1		ARCO	DM15-201J	C7	CAP, MICA, 200 pF, 5%
38			1			ARCO	DM15-101J		CAP, MICA, 100 pF, 5%
39									
40									
41				1		ARCO	DM15-911J	C8	CAP, MICA,910 pF, 5%
42			1			ARCO	DM15-331J		CAP, MICA, 330 pF,5%
43									
44									
45				1		ARCO	DM15-331J	C9	CAP,MICA,330 pF,5%
46			1			ARCO	DM15-181J		CAP,MICA,180 pF,5%
47									
48									
49				1		ARCO	DM15-181J	C10	CAP,MICA,180 pF,5%
50			1			ARCO	DM15-820J		CAP,MICA,82pF,5%

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51			5	5		SPRAGUE	CS13BE156K	C11,C12,C13	CAP, TANT, 15 uF 20V
52								C25,C29	
53									
54				1		ARCO	DM15-151J	C14	CAP, MICA,150 pF,5%
55			1				DM15-820J	C14	CAP,MICA,82 pF,5%
56									
57									
58				1		ARCO	DM15-820J	C15	CAP,MICA,82 pF,5%
59			1				DM15-330J	C15	CAP,MICA,33 pF,5%
60									
61									
62				1		ARCO	DM15-330J	C16	CAP,MICA,33pF,5%
63			1				DM15-100J	C16	CAP,MICA,10pF,5%
64									
65									
66				1		ARCO	DM15-151J	C17	CAP,MICA,150 pF,5%
67			1				DM15-820J	C17	CAP,MICA,82 pF,5%
68									
69									
70				1		ARCO	DM15-820J	C18	CAP,MICA,82pF,5%
71			1				DM15-330J	C18	CAP,MICA,33 pF,5%
72									
73									
74				1		ARCO	DM15-330J	C19	CAP,MICA,33pF,5%
75			1				DM15-100J	C19	CAP,MICA,10 pF,5%

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	SHEET 5 OF 8 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
76			1	1		SPRAGUE	192P4729R8	C24	CAP,POLYESTER,
77									.0047uf,80V.
78									
79			1	1		SPRAGUE	192P6839R8	C28	CAP,POLYESTER,
80									.068uF,80V.
81									
82			1	1		FAIRCHILD	1N4153	CR1	DIODE,SIGNAL,
83									SILICON
84									
85			1	1		RCA	1N270	CR2	DIODE,SIGNAL
86									GERMANIUM
87									
88			2	2		SELECTRO	226-4017-00-	TP1,TP2	TEST POINT
89							0-200		
90									
91									
92									
93									
94									
95			1	1		MOTOROLA	2N708	Q1	TRANSISTOR
96									
97			1	1		FAIRCHILD	2N3638	Q2	TRANSISTOR
98									
99			1	1		MOTOROLA	2N3904	Q3	TRANSISTOR
100									

PARTS LIST	..RB SINCER, I.. RESTON, VIRGINIA	CON...T N...ER	CODE IDENT	PL 107261	SHEET 6 OF 8 SHEETS

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
101				1		LENOX-FUGLE	NR-560	L1	INDUCTOR,560uh
102			1			LENOX-FUGLE	NR-270	L1	INDUCTOR,270uh
103									
104									
105				1		LENOX-FUGLE	NR-270	L2	INDUCTOR,270uh
106			1			LENOX-FUGLE	NR-120	L2	INDUCTOR,120uh
107									
108									
109				1		LENOX-FUGLE	NR-120	L3	INDUCTOR,120uh
110			1			LENOX-FUGLE	NR-39	L3	INDUCTOR,39uh
111									
112									
113				1		LENOX-FUGLE	NR-560	L4	INDUCTOR,560uh
114			1			LENOX-FUGLE	NR-270	L4	INDUCTOR,270uh
115									
116									
117				1		LENOX-FUGLE	NR-270	L5	INDUCTOR,270uh
118			1			LENOX-FUGLE	NR-120	L5	INDUCTOR,120uh
119									
120									
121				1		LENOX-FUGLE	NR-120	L6	INDUCTOR,120uh
122			1			LENOX-FUGLE	NR-39	L6	INDUCTOR,39uh
123									
124									
125									

PARTS LIST	HRB SINGER, Inc RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	SHEET 1 OF 8 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
126									
127									
128			2	2		BOURNS	3329W-1-202	R1,R2	POTENTIOMETER
129									2K,CERMET
130									
131									
132			11	11		IRC	RCR07G470JS	R3,R5,R6	RESISTOR,COMP,
133								R8,R24,R26	47Ω,¼W,5%
134								R27,R28,R30	
135								R37,R40	
136									
137									
138			7	7		IRC	RCR07G102JS	R4,R7,R21	RESISTOR,COMP,
139								R22,R23,R25	1K,¼W,5%
140								R31	
141									
142			6	6		IRC	RN55C2670F	R9-R14	RESISTOR,METAL
143									FILM,267Ω,1/8W,1%
144									
145			6	6		IRC	RN55C1501F	R15-R20	RESISTOR,METAL
146									FILM,1.5K,1/8W,1%
147									
148			1	1		IRC	RCR07G220JS	R29	RESISTOR,COMP,
149									22Ω,¼W,5%
150									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107261	SHEET 8 OF 8 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151			1	1		IRC	RCR07G472JS	R32	RESISTOR,COMP,
152									4.7K,¼W,5%
153									
154			1	1		IRC	RCR07G101JS	R33	RESISTOR,COMP,
155									100Ω,¼W,5%
156									
157			1	1		IRC	RCR07G510JS	R34	RESISTOR,COMP,
158									51Ω,¼W,5%
159									
160			1	1		IRC	RCR07G100JS	R35	RESISTOR,COMP
161									10Ω,¼W,5%
162									
163			1	1		IRC	RCR07G474JS	R36	RESISTOR,COMP,
164									470K,¼W,5%
165									
166			1	1		IRC	RCR07G222JS	R38	RESISTOR,COMP
167									2.2K,¼W,5%
168									
169			1	1		IRC	RCR07G153JS	R39	RESISTOR,COMP,
170									15K,¼W,5%
171									
172			4	4		NATIONAL	LH0002CH	U1,U2,U5,U6	INTEGRATED CIRCUIT
173									
174			2	2		NATIONAL	AH0015CD	U3,U4	INTEGRATED CIRCUIT
175									

NOTES:

REVISION			
LTR	DESCRIPTION	DATE	APPROVED
F	REVISED	3/25/77	

-1	RE107200-1	5046
DASH NO.	NEXT ASSY	USED ON APPLICATION

DRAWN BY:

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL:

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

AM/FM DETECTOR P.C. ASSY

SIZE	CODE IDENT	DWG NO.
A		PL 105865

CONTRACT NO.

SHEET 1 OF 9

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 2 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
1				X		HRB-SINGER	RC105865-1		ASSY, IF BW 1,2,4
2			X			HRB-SINGER	RC105865-2		ASSY, IF BW 1,2,4
3		X				HRB-SINGER	RC105865-3		ASSY, IF BW 5,1,2
4									
5		1	1	1		HRB-SINGER	RC105864-1		P.C.DETAIL
6									
7									
8				REF		HRB-SINGER	RD105861-1		SCHEMATIC
9			REF			HRB-SINGER	RD105861-2		SCHEMATIC
10		REF				HRB-SINGER	RD105861-3		SCHEMATIC
11									
12									
13									
14									
15									
16									
17		4	4	4		THERMALLOY CO.	7717-43N		TRANS PAD
18									
19		1	1	1		THERMALLOY CO.	7717-15N		TRANS PAD
20									
21		1	1	1		THERMALLOY CO.	7717-107N		I.C.Pad
22									
23									
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 3 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
26		18	18	18		SPRAGUE	TG-S10	C1,C2,C11	CAP,DISC,.01 uf,
27								C12,C13,C15	100V.
28								C20,C21,C22	
29								C23,C28,C30	
30								C31,C32,C44,C45	
31								C35,C49	
32		1	1	1		ELMENCO	DM15-330J	C3	CAP,
33									33 pF,5%
34									
35		6	6	6		SPRAGUE	CS13BE156K	C4,C6,C7,C9	CAP,TANT
36								C36,C37	15 uf,20V.
37									
38		1	1	1		ELMENCO	DM15-221J	C5	CAP,DIPPED MICA
39									220 pf,5%
40		1				ELMENCO	DM15-470J	C39	CAP,DIPPED MICA
41									47 pf,5%
42		1				ELMENCO	DM15-221J	C27	CAP,DIPPED MICA
43									220 pf,5%
44		1	1	1		ELMENCO	DM15-102J	C14	CAP,DIPPED MICA
45									1000 pf,5%
46		1	1	1		ELMENCO	DM15-100J	C25	CAP,DIPPED MICA,10pf,5%
47		2	2	2		ELMENCO	DM15-020J	C16,C48	CAP,DIPPED MICA
48									2 pf,5%
49			2	2		ELMENCO	DM15-470J	C39,C27	CAP,DIPPED MICA
50									47 pf,5%

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 4 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51		6	6	6		SPRAGUE	CS13BF105K	C17,C18,C29	CAP,TANT
52								C33,C34,C38	1 uf,35V.
53									
54		1	1	1		ELMENCO	DM15-102J	C19	CAP,DIPPED MICA
55									1000 pf,5%
56		1	1	1		REPUBLIC ENGINEERING	1U51RK	C24	CAP,51 pf,N750 ppm
57		1	1	1		ERIE	518-002A5-25	C26	CAP,CERAMIC
58									TRIMMER,5-25 pf
59									
60									
61									
62		1	1	1		ERIE	518-002A-2.5-9	C46	CAP,TRIMMER,2.5-9pF
63		1	1	1		FAIRCHILD	1N270	CR8	DIODE,SIGNAL
64									
65		1	1	1		MOTOROLA	1N4738A	CR2	DIODE,ZENER
66									
67		2	2	2		G-E	1N4157	CR3,CR7	DIODE,MUL
68									PELLET
69									
70		5	5	5		FAIRCHILD	1N4153	CR4,CR5,	DIODE,SIGNAL
71								CR11,CR12	
72								CR13	
73									
74		3	3	3		AERTECH	A2S800	CR6,CR9	DIODE,SCHOTTKY
75								CR10	

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 5 OF 9 SHEETS

ITEM NO.	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
76									
77									
78		2	2	2		STRUTHERS-DUNN	MRRQIA,	K1,K2	RELAY,DUAL-IN-
79							5VDC COIL		LINE,MINIATURE
80									DRY REED
81									
82		2	2	2		STRUTHERS-DUNN	MRR1CDL	K3,K4	RELAY,DUAL-IN-
83							5VDC COIL		LINE,MINIATURE
84									DRY REED
85									
86		2	2	2		LENOX-FUGLE	NR-6.8	L1,L2	COIL,6.8 uh
87									
88			1	1		LENOX-FUGLE	NR-0.39	L3	COIL,0.39 uh
89									
90		1	1	1		MOTOROLA	2N5266	Q1	TRANSISTOR
91									
92		1	1	1		MOTOROLA	2N708	Q2	TRANSISTOR
93									
94		1	1	1		FAIRCHILD	2N3638	Q3	TRANSISTOR
95									
96		1	1	1		MOTOROLA	2N3906	Q4	TRANSISTOR
97									
98		1	1	1		MOTOROLA	2N5160	Q5	TRANSISTOR
99									
100		1				LENOX-FUGLE	NR-0.18	L3	COIL,0.18 uh

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 6 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
101		4	4	4			RCR07G682JS	R1,R18,R19	RES,CARBON COMP
102								R6	6.8K,¼W,5%
103									
104		8	8	8			RCR07G470JS	R2,R3,R21	RES,CARBON COMP
105								R33,R34	47Ω,¼W,5%
106								R56,R57,R69	
107									
108		1	1	1			RCR07G332JS	R4	RES,CARBON COMP
109									3.3K,¼W,5%
110									
111		3	3	3			RCR07G102JS	R7,R20,R37	RES,CARBON COMP
112									1K,¼W,5%
113									
114		1	1	1			RCR07G223JS	R70	RES,CARBON COMP
115									22K,¼W,5%
116									
117		1	1	1			RCR07G105JS	R8	RES,CARBON COMP
118									1 MEG,¼W,5%
119									
120		4	4	4			RCR07G103JS	R9,R31,R32	RES,CARBON COMP
121								R35	10K,¼W,5%
122									
123		2	2	2			RCR07G510JS	R12,R36	RES,CARBON COMP
124									51Ω,¼W,5%
125									

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126		2	2	2			RCR07G221JS	R22,R24	RES,CARBON COMP
127									220Ω,¼W,5%
128									
129		2	2	2			RCR07G473JS	R14,R53	RES,CARBON COMP
130									47K,¼W,5%
131									
132		1	1	1			RCR07G2R7JS	R15	RES,CARBON COMP
133									2.7Ω,¼W,5%
134									
135		1	1	1			RCR07G151JS	R16	RES,CARBON COMP
136									150Ω,¼W,5%
137									
138		1	1	1			RCR07G182JS	R17	RES,CARBON COMP
139									1.8K,¼W,5%
140									
141		5	5	5			RCR07G471JS	R11,R23,R38	RES,CARBON COMP
142								R48,R50	470Ω,¼W,5%
143									
144		1	1	1			RCR07G123JS	R5	RES,CARBON COMP
145									12K,¼W,5%
146									
147		2	2	2			RCR07G222JS	R25,R68	RES,CARBON COMP
148									2.2K,¼W,5%
149									
150									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 105865	SHEET 6 OF 9 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151		2	2	2			RCR07G104JS	R26,R28	RES,CARBON COMP
152									100K,¼W,5%
153									
154									
155									
156		6	6	6			RCR07G561JS	R40,R41,R42	RES,CARBON COMP
157								R43,R46,R47	560Ω,¼W,5%
158									
159		1	1				RCR07G391JS	R10	RES,CARBON COMP
160									390Ω,¼W,5%
161									
162									
163		3	3	3			RCR07G152JS	R30,R39,R44	RES,CARBON COMP
164									1.5K,¼W,5%
165									
166				1			RCR07G561JS	R10	RES,CARBON COMP
167									560Ω,¼W,5%
168									
169		1	1	1			RCR07G100JS	R45	RES,CARBON COMP
170									10Ω,¼W,5%
171									
172		1	1	1			RCR07G151JS	R49	RES,CARBON COMP
173									150Ω,¼W,5%
174									
175									

PARTS LIST | HRB–SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 105865 | SHEET 9 OF 9 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
176									
177									
178									
179		5	5	5			RCR07G101JS	R27,R29,R51	RES,CARBON COMP
180								R62,R67	100Ω,¼W,5%
181									
182		1	1	1		BOURNS	3329W-100K	R52	RES,VAR. CERMET
183									100K
184									
185									
186									
187									
188		2	2	2			RCR07G273JS	R54,R55	RES,CARBON COMP
189									27K,¼W,5%
190		1	1	1		BOURNS	3329W-10K	R71	RES,VAR. CERMET,10K
191		1	1	1		NATIONAL SEMICOND	LM301AH	U1	I.C.
192									
193		2	2	2		NATIONAL SEMICOND	LH0032C	U2,U7	I.C.
194									
195		2	2	2		T.I.	SN75452BP	U3,U5	I.C.
196									
197		1	1	1		MOTOROLA	MC10116L	U4	I.C.
198									
199		1	1	1		T.I.	SN76514N	U6	I.C.
200									

PARTS LIST	HRB-SINGER, INC. SCIENCE PARK, STATE COLLEGE, PA. U.S.A	CONTRACT NO	CODE IDENT 99592	PL 105061	DIVISION LTR F DATE 1-6-77
LIST TITLE P C ASSY, 5-DIGIT READOUT		ASSY DWG REV LTR	AUTHENTICATION	REV AUTH NO. ANS TYPED 5-6-75	SHEET 1 OF 1 SHEETS

ITEM OR FIND NUMBER	-1 QTY RQD	-2 QTY RQD	QTY RQD	CODE IDENT.	DWG SIZE	DRAWING OR DOCUMENT NUMBER	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION
1	-				C	RC105061	RC105061-1	P C ASSY, 5-DIGIT READOUT
2		-			C	RC105061	RC105061-2	P C ASSY, 5-DIGIT READOUT
5	2	2			C	RC105062	RC105062-1	MOUNTING BLOCK
6	1	1			C	RC105060	RC105060-1	P C DETAIL
7	REF	REF			C	RC105057	RC105057-1	SCHEMATIC DIAGRAM
8	AR	AR				ALPHA	TFT-250/22	#22 SLEEVING
9	16					CTC	2100-2	E1 THRU E16 TERMINAL
11	4	4				AL METAL		DRIVE SCREW, RD HD, 0 x 3/16 LG BLUNT POINT, TYPE U, SST
14	2	2				H.H. SMITH	2335	SPACER, PHENOLIC 1/4 LG x 1/40 OD .115 ID
16	5	5				FAIRCHILD	FND357	U1 THRU U5 NUMERIC DISPLAY
18	1					HP	5082-4584	CR2 LAMP, YEL, SOLID STATE
20	1					HP	5082-4984	LAMP, GRN, SOLID STATE CR1
22	1						RCR07G221JS	R1 RESISTOR, 220 OHM, 1/4 W, 5%
24	1	1					RCR07G471JS	R2 RESISTOR, 470 OHM, 1/4 W, 5%
25		14				CTC	2100-2	E3 THRU E16 TERMINAL

NOTES:

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

DRAWN BY:	HRB-SINGER, INC. RESTON, VA., USA		
Bill Wargo			
CHECKED BY:	PRE-SELECTOR		
CONTRACTOR CERTIFICATION:			
DESIGN APPROVAL: 6-1-77	SIZE: A	CODE IDENT	DWG NO.: PL 107361
DOCUMENTATION APPROVAL:		CONTRACT NO.	SHEET: 1 OF 8

DASH NO.	NEXT ASSY APPLICATION	USED ON
-1	RD107360-1	5046

PARTS LIST | HRB-SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 107361 | SHEET 2 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X			RD107360-1		ASSY
2									
3									
4									
5				1			RD107365-1		PC DETAIL
6				REF			RE107362-1		SCHEMATIC
7				1			RD107366-1		HOUSING, LEFT SIDE PLATE
8				1			RD107366-2		" , RIGHT SIDE PLATE
9				1			RD107366-3		" , BOTTOM PLATE
10				1			RD107366-4		" , TOP PLATE
11									
12				REF			RC107348-1		SILK SCREEN ART
13									
14									
15									
16									
17									
18				6		THERMALLOY	7717-43N		PAD, TRANSISTOR
19									
20				AR		EMERSON & CUMING	56C		CONDUCTIVE EPOXY
21									
22									
23				1		AUGAT	524-AG1D		SOCKET, I.C., 24 PIN
24									
25				1		AUGAT	516-AG10D		SOCKET, I.C., 16 PIN

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107361	SHEET 3 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				10		ERIE	1250-003	C1,C2,C3,C4,C5 C6,C7,C8,C9,C10	CAPACITOR, FEED-THRU 1500pf
				6		SPRAGUE	150D104X9035A2	C11,C12,C13, C14,C15,C16	CAPACITOR, TANTALUM .1uf, 35V
				1		ATC	ATC100-B-161-G-P-300	C17	CAPACITOR, CHIP 160pf
				2		ATC	ATC100-B-510-G-P-500	C18, C27	CAPACITOR, CHIP 51pf
				1		ATC	ATC100-B-820-G-P-500	C19	CAPACITOR, CHIP, 82 pf
				2		ATC	ATC100-B-3R3-C-P-500	C20, C23	CAPACITOR, CHIP, 3.3pf
				13		VITRAMON	VJ0805X472KF	C21, C24, C26, C29, C31, C34, C36, C39, C41, C44, C46, C49, C50	CAPACITOR, CHIP, 4700pf
50									

PARTS LIST | HRB-SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 107361 | SHEET 4 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				2		ATC	ATC100-B-180-G-P-500	C22, C32B,	CAPACITOR, CHIP, 18 pf
				2		ATC	ATC100-B-8R2-C-P-500	C25, C28	CAPACITOR, CHIP 8.2 pf
				2		ATC	ATC100-B-120-G-P-500	C30, C33	CAPACITOR, CHIP 12 pf
				1		ATC	ATC100-B-121-G-P-300	C32A	CAPACITOR, CHIP 120pf
				2		ATC	ATC100-B-100-G-P-500	C35, C38	CAPACITOR, CHIP 10 pf
				1		ATC	ATC100-B-101-G-P-500	C37	CAPACITOR, CHIP 100pf
				2		ATC	ATC100-B-4R7-C-P-500	C40, C43	CAPACITOR, CHIP, 4.7 pf
				1		ATC	ATC100-B-330-G-P-500	C42	CAPACITOR, CHIP, 33 pf
75									

PARTS LIST | HRB–SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 107361 | SHEET 5 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76				2		ATC	ATC100-B-2R4-C-P-500	C45, C48	CAPACITOR, CHIP 2.4pf
				1		ATC	ATC100-B-160-G-P-500	C47	CAPACITOR, CHIP, 16pf
				1		VITRAMON	VJ0805A5R6DF	C51	CAPACITOR, CHIP 5.6 pf
				1		VITRAMON	VJ0805A2R2DF	C52	CAPACITOR, CHIP, 2.2pf
				1		VITRAMON	VJ0905A2R7DF	C53	CAPACITOR, CHIP, 2.7pf
				1		MOTOROLA	IN4153	CR1	DIODE, SILICON
				1		MOTOROLA	IN4735A	CR2	DIODE, ZENER, 6.2V
				18		GHz DEVICES	4313-15	CR3-CR20	DIODE, PIN
100									

PARTS LIST | HRB–SINGER, INC RESTON, VIRGINIA | CONTRACT NUMBER | CODE IDENT PL 107361 | SHEET 6 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
101				1		HRB-SINGER	RC107359-4	L1	INDUCTOR, .3uh
				1		HRB-SINGER	RC107359-7	L2	INDUCTOR, .2uh
				1		HRB-SINGER	RC107359-8	L3	INDUCTOR, .1uh
				1		HRB-SINGER	RC107368-1	L4	INDUCTOR, .5nh
				14		HRB-SINGER	RC107369-1	L5,L6,L10,L11, L15,L16,L20,L21, L25,L26,L30, L31,L35,L36	WIDE BAND RF CHOKE
				2		HRB-SINGER	RC107368-2	L7,L9	INDUCTOR, 82nh
				1		HRB-SINGER	RC107368-5	L8	INDUCTOR, 11nh
				2		HRB-SINGER	RC107359-9	L12,L14	INDUCTOR, 199nh
				1		HRB-SINGER	RC107368-6	L13	INDUCTOR, 29nh
				2		HRB-SINGER	RC107359-10	L17,L19	INDUCTOR, 530nh
				1		HRB-SINGER	RC107368-7	L18	INDUCTOR, 50nh
125									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107361	SHEET 1 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
126				2		HRB-SINGER	RC107359-11	L22, L24	INDUCTOR, 374nh
				1		HRB-SINGER	RC107368-8	L23	INDUCTOR, 36nh
				2		HRB-SINGER	RC107368-3	L27, L29	INDUCTOR, 135nh
				1		HRB-SINGER	RC107368-9	L28	INDUCTOR, 17nh
				2		HRB-SINGER	RC107368-4	L32, L34	INDUCTOR, 62nh
				1		HRB-SINGER	RA107349-1	L33	INDUCTOR, 6nh
				1		HRB-SINGER	RC107368-10	L37	INDUCTOR, ≈15nh
				1		HRB-SINGER	RC107368-11	L38	INDUCTOR, ≈10nh
				1		HRB-SINGER	RC107368-13	L39	INDUCTOR, ≈5nh
				2		OMNI-SPECTRA	OSM-274	J1, J2	CONNECTOR, SMA
				6		MOTOROLA	2N3906	Q1-Q6	TRANSISTOR, PNP
150									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107361	SHEET 8 OF 8 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
151				2		ALLEN BRADLEY	RCR05G510JS	R1, R34	RESISTOR, CARBON 51Ω, 1/8W
				2		ALLEN BRADLEY	RCR07G272JS	R2, R33	RESISTOR, CARBON, 2.7KΩ, 1/4W
				12		ALLEN BRADLEY	RCR05G471JS	R3, R7, R8, R12, R13, R17, R18, R22, R23, R27, R28, R32	RESISTOR, CARBON, 470Ω, 1/8W
				12		ALLEN BRADLEY	RCR07G472JS	R4, R6, R9, R11, R14, R16, R19, R21, R24, R26, R29, R31	RESISTOR, CARBON, 4.7KΩ, 1/4W
				6		ALLEN BRADLEY	RCR07G222JS	R5, R10, R15, R20, R25, R30	RESISTOR, CARBON 2.2K, 1/4W
				1		INTEL	1702A	U1	IC., PROM
				1		T. I.	SN7445	U2	I.C.
175									

NOTES:

REVISION

LTR	DESCRIPTION	DATE	APPROVED
A	REVISED	6/6/77	
B	REVISED	9/12/77	

DRAWN BY: Dave Carroll 5/10/77

CHECKED BY:

CONTRACTOR CERTIFICATION:

DESIGN APPROVAL: 10/3/77

DOCUMENTATION APPROVAL:

HRB-SINGER, INC.
RESTON, VA., USA

PRE-D CONVERTER PARTS LIST

SIZE	CODE IDENT	DWG NO.
A		PL 107351

CONTRACT NO.

SHEET 1 OF 11

DASH NO	NEXT ASSY	USED ON
	APPLICATION	
-1	RD107350-1	5046

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 2 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
1				X		HRB-SINGER	RD107350-1		ASSY
2									
3									
4									
5				REF		HRB-SINGER	RD107352-1		SCHEMATIC
6									
7									
8				1		HRB-SINGER	RD107355-1		P.C.DETAIL
9									
10				1		HRB-SINGER	RD107356-1		HOUSING
11									
12				1		HRB-SINGER	RC107357-1		SHIELD
13									
14									
15									
16									
17				28		AUGAT	LSG-1DG4-1		PIN
18									
19				4		AUGAT	8058-1G49		SOCKET,8 PIN
20									
21				2		AUGAT	8058-1G91		SOCKET,10 PIN
22									
23				1		AUGAT	514-AG10D		SOCKET, 14 PIN
24									
25									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 3 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
26				6		THERMALLOY CO.	7717-43N		TRANS PAD
27									
28				6		CAMBION	1558-2	E3,E4,E13,E14,	TERMINAL
29								E15,E24	
30									
31				16		SEALECTRO	ST-SM-16	E5-E12,E16-E23	TERMINAL INSUL.
32									
33									
34				1		SEALECTRO	FT-SM-022	E2	FEED-THRU
35									
36				2		OSM	OSM 244-2	J1,J2	CONNECTOR
37									
38				1		CAMBION	2051-1	E1	GND LUG
39									
40				2		WAKEFIELD	202CB		HEAT SINK, TO-18
41									
42				1		CTC	160-2051-01-01-00		GND TERMINAL
43									
44									
45									
46				3		ERIE	1201-054	C54,C55,C56	CAP FT 1500pF
47									
48									
49									
50									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 4 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
51				1		HRB-SINGER	RD105531-1	C5	CAP 208.3pF +.25%
52									
53				1		HRB-SINGER	RD105531-2	C6	CAP 62.59pF +.25%
54									
55				2		HRB-SINGER	RD105531-3	C7,C19	CAP 1000 pF +.25%
56									
57				1		HRB-SINGER	RD105531-4	C8	CAP 130pf +.25%
58									
59				1		HRB-SINGER	RD105531-5	C17	CAP 331.9pF +.25%
60									
61				1		HRB-SINGER	RD105531-6	C18	CAP 137.8pF +.25%
62									
63				1		HRB-SINGER	RD105531-7	C20	CAP 224 .5pF +.25%
64									
65				4		ARCO	DM-15-201J	C1,C2,C13,C14	CAP 200pF +5%
66									DIPPED MICA
67									
68				12		SPRAGUE	150D105X9035A2	C3,C4,C10,C11,	CAP 1uF 35V TANTALUM
69								C15,C16,C22,C23	
70								C25,C26,C28,C29	
71				2		SPRAGUE	150D475X9035B2	C9,C21	CAP 4.7uF 35V TANTALUM
72									
73									
74				2		SPRAGUE	150D685X9035B2	C12,C24	CAP 6.8uF 35V TANTALUM
75									

ITEM NO.	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
76									
77									
78									
79				12		SPRAGUE	TG-S10	C30,C34,C35,C36	CAP .01uF 100V DISC
80								C38,C40,C41,C44	
81								C46,C48,C51,C53	
82									
83									
84				1		ARCO	DM-15-330J	C32	CAP 33pF ±5%
85									DIPPED MICA
86									
87				1		ARCO	DM-15-102J	C31	CAP 1000pF ±5%
88									DIPPED MICA
89									
90				7		ERIE	518-000A5-25	C42,C49,C60,C63,	CAP VARIABLE 5-25pF
91								C65,C67,C68	
92									
93				2		ARCO	DM-15-101J	C43,C50	CAP 100pF ±5%
94									DIPPED MICA
95									
96				4		ARCO	DM-15-331J	C45,C52,C69,C70	CAP 330pF ±5%
97									DIPPED MICA
98									
99				1		ARCO	DM-15-680J	C47	CAP 68pF ±5%
100									DIPPED MICA

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 6 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
101				1		SPRAGUE	150D474X9035A	C37	CAP .47uF,TANT.
102				1		ARCO	DM15-220J	C39	CAP 22pF,MICA
103				1		ARCO	DM15-100J	C33	CAP 10pF,MICA
104				3		SPRAGUE	150D156X9020B2	C57,C58,C59	CAP 15uF 20V
105									TANTALUM
106									
107				2		ARCO	DM-15-271G	C61,C66	CAP 270pF ±2%
108									DIPPED MICA
109									
110				1		ARCO	DM-15-161G	C62	CAP 160pF ±2%
111									DIPPED MICA
112									
113				1		ARCO	DM-15-201G	C64	CAP 200pF ±2%
114									DIPPED MICA
115									
116				4		MOTOROLA	1N4736A	CR1-CR4	DIODE ZENER 6.8V 5%
117									
118									
119				1		MOTOROLA	MV-2111	CR5	VARACTOR
120									
121				2		LENOX FUGLE	NR-0.68	L1,L2	INDUCTOR 0.68uH ±10%
122									
123				1		LENOX FUGLE	NR-6.8	L10	INDUCTOR 6.8uH ±10%
124									
125									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET / OF 11 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
126				1			RC107359-1	L3	INDUCTOR 2.95uH
127									
128				2			RC107359-2	L4,L5	INDUCTOR 0.65uH
129									
130				2			RC107359-6	L6,L9	INDUCTOR 0.199uH
131									
132				1			RC107359-3	L7	INDUCTOR 0.252uH
133									
134				1			RC107359-4	L8	INDUCTOR 0.314uH
135				1			RC107359-5	L11	INDUCTOR 1.60uH
136				3		MOTOROLA	2N5179	Q1-Q3	TRANSISTOR
137									
138				1		MOTOROLA	2N3904	Q4	TRANSISTOR
139									
140				2		SIGNETICS	SD306	Q5,Q6	D-MOS FET
141									
142									
143				1		VISHAY	V53-2949	R12	RESISTOR 2949Ω ±.1%
144									METAL FILM
145									
146				1		VISHAY	V53-9747	R14	RESISTOR 9747Ω +.1%
147									METAL FILM
148									
149									
150									

PARTS LIST	HRB–SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 8 OF 11 SHEETS

ITEM NO	QTY REQUIRED				CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
	-4	-3	-2	-1					
151				1		VISHAY	V53-590	R15	RESISTOR 590Ω .1%
152									METAL FILM
153									
154				1		VISHAY	V53-31,040	R16	RESISTOR 31,040Ω .1%
155									METAL FILM
156									
157				1		VISHAY	V53-4720	R17	RESISTOR 4720Ω.1%
158									METAL FILM
159									
160				1		VISHAY	V53-498.4	R13	RESISTOR 498.4Ω .1%
161									METAL FILM
162									
163				1		VISHAY	V53-750.6	R27	RESISTOR 750.6Ω .1%
164									METAL FILM
165									
166				1		VISHAY	V53-61.85	R28	RESISTOR 61.85Ω .1%
167									METAL FILM
168									
169				1		VISHAY	V53-2201	R29	RESISTOR 2201Ω .1%
170									METAL FILM
171									
172				1		VISHAY	V53-77.17	R30	RESISTOR 77.17Ω .1%
173									METAL FILM
174									
175									

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
176				1		VISHAY	V53-9316	R31	RESISTOR 9316Ω .1%
177									METAL FILM
178									
179				1		VISHAY	V53-1417	R32	RESISTOR 1417Ω .1%
180									METAL FILM
181									
182				2		OHMITE	RN55C47R5F	R2,R4	RESISTOR 47.5Ω ±1%
183									METAL FILM
184									
185				2		OHMITE	RN55C61R4F	R5,R1	RESISTOR 61.9Ω ±1%
186									METAL FILM
187									
188				4		OHMITE	RN55C4750F	R59,R64,R20,R35	RESISTOR 475Ω ±1%
189									METAL FILM
190									
191				2		OHMITE	RCR07G510JS	R6,R21	RESISTOR 51Ω ±5%
192									¼W COMP
193									
194				8		OHMITE	RCR07G 221JS	R7,R8,R22,R23,	RESISTOR 220Ω ±5%
195								R9,R11,R24,R26	¼W COMP
196									
197				3		OHMITE	RCR07G 471JS	R48,R49	RESISTOR 470Ω 5% ¼W COMP
198									
199									
200									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 10 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
201				12		OHMITE	RCR07G470JS	R18,R19,R33,R34	RESISTOR 47Ω ±5%
202								R40,R41,R42,R50,	¼W COMP
203								R61,R66,R36,R38	
204									
205				1		OHMITE	RCR07G393JS	R37	RESISTOR 39K ±5%
206									¼W COMP
207				2		OHMITE	RCR07G472JS	R65,R60	RESISTOR 4.7K ±5% ¼WCOMP
208				2		OHMITE	RCR07G102JS	R39,R45	RESISTOR 1K ±5%
209									¼W COMP
210									
211				6		OHMITE	RCR07G103JS	R44,R46,R47,R52	RESISTOR 10K ±5%
212								R58,R63	¼W COMP
213									
214				1		OHMITE	RCR07G473JS	R51	RESISTOR 47K ±5%
215									¼W COMP
216									
217				2		OHMITE	RCR07G222JS	R53,R43	RESISTOR 2.2K ±5%
218									¼W COMP
219									
220				32		OHMITE	RCR07G152JS	R54,R55	RESISTOR 1.5K ±5%
221									¼W COMP
222									
223				1		OHMITE	RCR07G223JS	R56	RESISTOR 22K ±5%
224									¼W COMP
225									

PARTS LIST	HRB-SINGER, INC RESTON, VIRGINIA	CONTRACT NUMBER	CODE IDENT	PL 107351	SHEET 11 OF 11 SHEETS

ITEM NO	QTY REQUIRED -4	-3	-2	-1	CODE IDENT	MFG. OR DOCUMENT NUMBER	PART OR IDENTIFYING NO.	REF DESIGNATION	NOMENCLATURE OR DESCRIPTION
226				1		OHMITE	RCR07G152J	R57	RESISTOR 1.5K ±5%
227									¼W COMP
228									
229				2		OHMITE	RCR07G100JS	R62,R67	RESISTOR 10Ω ±5%
230									¼W COMP
231				1		BOURNS	3339P-1-500	R3	POT 50Ω CERMET
232				2		BOURNS	3329P-1-501	R10,R25	POTENTIOMETER
233									500Ω CERMET
234				2		FAIRCHILD	733HC	U1,U3	IC
235									
236				3		NATIONAL	LH0002CH	U2,U4,U5	IC
237				1		NATIONAL	LM301AH	U7	IC
238				1		NATIONAL	LH0032CG	U6	IC
239									
240				1		HUGHES	HCTR 0320P	U8	IC
241									
242				1		TI	SN7490	U9	IC
243									
244									
245				1		INTERNATIONAL CYRSTAL	CS-HC18U	Y1	CRYSTAL 20.350
246							20.350MHz		MHz ±.0025%
247							±.0025%		
248				2		MINI CIRCUIT LABS	SBL-1	Z1,Z2	MIXER DOUBLE-BAL
249									
250									